

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXII. No. 14
WEEKLY.

BALTIMORE, OCTOBER 29, 1897.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE
Manufacturers' Record Publishing Co.
RICHARD H. EDMONDS, President.
OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

NEW ENGLAND OFFICE:
Room 14, 299 Devonshire Street, Boston, Mass.
S. I. CARPENTER, Manager.

Special Traveling Representatives:
RICHARD S. EVANS,
I. S. FIELD.

SUBSCRIPTION, - - - \$4.00 a Year.
To FOREIGN COUNTRIES, - - \$6.50 a Year.

BALTIMORE, OCTOBER 29, 1897.

Utilizing Water-Power.

In the October number of Cassier's Magazine is an article on turbine building in Switzerland of special interest to the electrical and hydraulic engineer, but also suggestive to persons engaged in industrial development in the South. The author, Alph Steiger, describes a number of the plants which have been erected for the generation of electrical energy and exploits the difficulties which have been overcome in a country where the water supply in mountainous districts where no natural or artificial lakes are available is irregular and unreliable. Still he recalls the opinion of an American engineer, that Switzerland is the electrical centre of Europe, and also that it is the hydraulic centre.

In the presence of Niagara it may seem vain to hope that the South may become the centre of the water-power of this country, and, consequently, of the world. Much has already been done to utilize this power, but the supply is inexhaustible; it is not hampered by limitations of temperature which prevail in other parts, and whatever there may be of inaccessibility is a constantly vanishing factor, as the advantages of devices for the transmission of electricity are becoming more and more recognized. An idea of the latent water-power in North Carolina alone may be had from the fact that the 3330 miles of large rivers in that State, not including powerful smaller streams, have an average fall of ten feet to the mile. Then there are millions of power of the same kind in Virginia, South Carolina, Georgia, Alabama, Tennessee and other States. At one time it gave pioneer industries the advantage over established ones in other parts of the country. With the advent of railroads and the application of steam its importance was comparatively diminished, but electricity is making it more and more valuable every day, and its possibilities are incalculable.

The South can afford to profit by the experience of Switzerland in this respect.

For a Textile School.

Messrs. Charles Pearson, C. B. Williams and C. D. Francks, a special committee of the Alumni Association of the North Carolina College of Agriculture and Mechanic Arts, have set vigorously to work upon the plan for the establishment of a textile school in connection with that institution. In a letter to the Manufacturers' Record Mr. Pearson, whose home is at Raleigh, says:

The subject has been thoroughly discussed by our committee, and will be formally presented to the college board of control at its next meeting. The prospect is that this branch of work will soon be taken up by the college, but what we want to do is to establish here a textile school that will have the hearty co-operation and support of the manufacturers of the South; in short, a school that will be truly a Southern textile school. We feel that our college offers a splendid foundation for such a school, and we are going to push the project to the end.

This subject has been discussed by the Watauga Club, the Chamber of Commerce and the Alumni Association of the college, and their joint purpose is to make a success of the undertaking. There have been several propositions on the same line, the latest, the intention to obtain from the Georgia legislature an appropriation for a textile department in the Georgia Technological School.

In this connection should be carefully considered the following words of Major J. F. Hanson, of Macon, Ga.:

I am gratified to see that in several of the Southern States there is renewed interest in the question of textile education. It is conceded, I think, that cotton manufacturing will be the leading branch of manufacturing in the South, and certainly so in the cotton States. As yet the business is in its infancy. It has, however, passed both the experimental and sentimental stages, and for the future must become a cold matter of business. We have many capable men as foremen and superintendents who have educated themselves while working in our mills to the point of their present proficiency. They have labored under serious disadvantages, but have demonstrated what can be accomplished by persistent application. Scores of hundreds of our young men, better educated, and, in fact, well educated, as the term is generally applied, are out of employment, or are crowding each other in the few avenues open for employment and business. If they had been trained in a good textile school they would have found employment more profitable to themselves, as well as to the communities in which they live.

The October number of Cotton, Oil and Iron, published by the D. A. Tompkins Co., of Charlotte, N. C., is a textile-school edition. The surrender of space to such a subject is set forth in an editorial dealing with the cotton industry as follows:

The full development of this industry into all its tremendous possibilities must nevertheless rest upon a thorough understanding of the mill business. We must breed "mill men" and not import them. True, the South has done wonders thus far in this direction, and it is a matter of never-ceasing astonishment to our Northern brethren and of congratulation to ourselves that out of raw material, raised on the plantation and bred in the country store, we have developed a class of mill managers who have been the successful pilots in a

host of successful Southern cotton mills. But it must be remembered that unusual conditions have favored the South, rendering large profits easy to secure, even in the face of loose management as to detail. We may not hope that these conditions will always obtain. Increasing competition among ourselves will reduce margins, and to meet this we must know how to reduce operating expenses.

These expressions indicate that the South is deeply interested in the project. Augusta, Atlanta and Clemson College are among the other places suggested as sites for such a school. Georgia and the two Carolinas will be benefited by its establishment in either one of them, and perhaps the day may come when a first-class textile school shall be supported in each. But at the present time the energies of all interests should be concentrated upon one institution, wherever it may be established. It can be established, and should be. The city which becomes its home will never cease to regard it as a bit of good fortune, nor will Southern influences which contribute to its successful foundation ever have occasion to regret their action.

Tennessee in Honor.

The Tennessee Centennial Exposition, now about to close, is a notable instance of Southern enterprise and persistency. Financially it may not have met the anticipations of its most sanguine promoters. Complete figures are yet to be announced. But the finances are of minor importance. They will be recorded merely as one token of the wisdom which has directed the whole undertaking. The showing under all the circumstances will be most creditable, but the South will honor Tennessee upon much higher grounds.

It was the first State to celebrate the centennial of its admission to the Union. In that respect its exposition was unique. But it was also remarkable for the bravery, almost audacious, that conceived it at a time when the financial outlook was most gloomy and when the demoralization of national political excitement was widespread. There was, however, nothing foolhardy in this bravery. It was backed by calm judgment, native ability, strength and versatility, which not only opened the exposition's gates upon a picture of beauty practically complete, but gathered from many quarters attractions so practical, so educational and so elevating that probably a million and a-half persons and more will remember the display as a marked page in their lives.

The whole country will share in the material benefits flowing from the exposition. But the lion's share should come to the South. It was the conception of a Southerner, its buildings and grounds were planned by Southerners and its administration was Southern. But Tennessee takes the palm. The president of the exposition, its director-general, its chief of ma-

chinery, its superintendent of electricity and its engineer in charge were born in Tennessee, and they have set an example of co-operation which every Southern community may emulate with profit.

They have placed their State in a conspicuous place in the court of honor and their State should not forget them.

A Fair Balance.

Referring to the decision of the Georgia railroad commission against a proposed reduction of 25 per cent. in cotton rates, the Macon Telegraph says:

The fact that the decision of the railroad commission was against the extraordinary cut in rates proposed is evidence that railroad property in Georgia will be permitted to earn dividends, and, while the railroad commission holds an open ear to all complaints, it endeavors to hold the balance fairly as between the railroad stockholders and the shipper.

This position of the Telegraph is in thorough agreement with that of everybody who wishes for the steady growth of the South. The logical opposite of ability of a railroad to earn dividends is wreck of the railroad. As long as the Georgia commission and Georgia sentiment, as reflected by the Telegraph, is opposed to wrecking railroads there is hope that the State which owes so much to railroads will maintain its importance as an example for other States.

Defining a Curse.

One or two Southern newspapers have claimed that the Manufacturers' Record is incorrect in asserting that the South has too many political demagogues, and they insist that we have maligned their section. The Manufacturers' Record imagines that the work which it has for fifteen years done in defense of the South is proof sufficient of its devotion to the interests of this section, and proof that it has never wavered in saying what it believes to be for the right, without regard to criticism or commendation. It has never claimed that the South is more cursed by demagogues than other sections, but as it is working for the South and not for other sections, it confines its efforts to whatever affects the prosperity of the South.

But, has the South more demagogues than it needs? Something of an answer is given in two Alabama papers. The Tuscaloosa Evening Times says:

One of the most pernicious characters brought forth by the abuse of free institutions is the demagogue. His business is to obtain special privileges by corrupt influences. With him the true standard of merit is lost in personal considerations. He rides into office, not because he has shown attention to any useful business, or contributed anything of value to society, but because he has blown his own trumpet, degraded himself among his followers and won the character of being a good fellow.

The demagogue is the professed worshiper of the sovereign people. He is a fawning sycophant at the foot of power, ever groveling in the dust, ready to do any service, however debased, perform any act, however wrong, if he can only win public

patronage and political prestige. This despicable and perfidious character abounds in our midst. He is both a menace and an exorcism. He is unscrupulous and has no moral standard.

The Sheffield Reaper uses still more vigorous language, as follows:

The demagogue is everywhere, but mostly in office or trying to get in. He is ever-present, and without beginning or ending—a continuous plague. The only excuse for his prominence is a senseless toleration. His influence is vicious and blunts all moral principles. He is a visible quantity on all occasions: in the church councils, in legislative councils, in executive positions, in school councils, in the brothels, in the saloons, in the highest and in the lowest places, always with deception and mean politics oozing from him like a deadly pestilence. He takes pot-luck with kings and beggars, wherever hunger overtakes him. He is the most plausible and purchasable human commodity God ever created (if God created him). He is just any and every old thing except good. He, in his own estimation, is the saviour of the country; but the world would be a placid paradise without his slimy, enervating presence. He's a plague, a pest, a mange, a human razor-back who never dies. At least he never does in Alabama.

Will our critics be kind enough to ponder upon these words?

The New England Cotton Manufacturers' Association met in Philadelphia this week and with it assembled members of the Southern Textile Association. Some of the Southern mill men are members of the New England organization and have attended its meetings. The fraternizing of representatives of both bodies at Philadelphia should have results extending beyond the adjournment of the meeting. At times it may appear that the interests of the two sections as cotton manufacturers are conflicting. But there are certain points upon which they may unite for a common purpose, and the good of all may be advanced by friendly discussion and comparison taking the place of misinformation and ill-feeling. This should be the effect of the joint meeting just held.

Southern States Farm Magazine.

With the November number the "Southern States" magazine, of Baltimore, comes out as the "Southern States Farm Magazine." The work of the magazine for several years has been to influence agricultural immigration to the South by publishing accurate information about agriculture in the South, discussing all questions likely to interest Northern farmers looking to the South as a possible future home, correcting mistaken views about the South and making known the real facts about its soil, climate, agricultural capabilities and social conditions. Its discussions of topics related to Southern agriculture have aroused a widespread interest throughout the South, as manifested in letters from prominent farmers, from officials of agricultural experiment stations and agricultural colleges and from many other sources. This interest, which has been rapidly expanding, has seemed to demand that the magazine should give larger attention to Southern agriculture from the point of view of the farmer. And in response to this demand the "Southern States" becomes now, both in name and in fact, the "Southern States Farm Magazine." It will be, therefore, not simply an exponent of the cause of agricultural immigration to the South, but besides that a general periodical of Southern agriculture. It will labor none the less assiduously to bring about the peopling of the unoccupied lands of the South with farmers from other and less favored parts of the Union, but, along with that, it will work with equal energy

and aggressiveness in behalf of the welfare and advancement of the present farm population of the South. Dr. Chas. W. Dabney, ex-United States Secretary of Agriculture and president of the University of Tennessee, and Col. J. B. Kilbrew, author of a number of works on agriculture, are members of the editorial staff. Both of them contribute articles to the November number, the former writing on "Some Needs of Southern Agriculture," and the latter on "The Old Plantation Versus Intensive Farming." It is stated that the magazine will publish the best thoughts of the best agricultural writers of the age, and of the most successful practical farmers.

Industrial News from Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., October 26.

If one takes his "cue" of the market from the expressed opinions of those high in the iron world, the situation is one of great encouragement. There is nothing in it that justifies pessimistic conclusions. At the same time, there has been some "wobbling" in prices, and, in special cases, a concession in price. But this was not due in any sense to any general weakness in the market. More or less of iron warrants have been on the market, and, when not taken at open quotations, temptation, in the way of a shade in prices, has been offered buyers, until \$6.75 was the current value of gray forge iron warrants. This price has been met by some furnaces when policy prompted. But it is not general, and the market cannot be quoted under \$7. The new business offering is of no magnitude. Transactions are limited both in number and volume. Shipments continue to be free and stocks show up favorably in sellers' interest. The export business is quiet.

The armor-plate board has come and gone. They spent two days in investigating the resources of this locality. They came with very crude and indefinite ideas concerning the capabilities of this district, and a majority of the board didn't even know that we had a steel mill here. So when the vastness of our industrial plants was unfolded to their vision, surprise was manifested and the greater interest was awakened in what was before them. If their privately unofficially expressed opinion can be taken as indexing the character of their official report, Birmingham can have nothing to fear from its publication.

The Howard-Harrison Pipe Works had their capacity for unusual, difficult and delicate work put to the test the past week in the casting of culvert pipe seventy-two inches in diameter, twelve feet six inches long and two inches thick. Heretofore sixty inches in diameter has been the maximum size of pipe. As it is stated that you can count on the fingers of one hand all the works on this Continent capable of such a feat, its significance is apparent. At the rolling mill there is no cessation of activity and no evidence of any let-up in the immediate future. They continue to report a satisfactory business.

A new enterprise has been born here whose parentage is exclusively local, and it has been named "The Southern Iron and Structural Works." It is endowed with a capital of \$20,000, and has filed its articles of incorporation. Plans for the buildings are being prepared, which will consist of foundry 70x75 feet; machine shop 40x75 feet, two stories high; wire works shop 25x100 feet, two stories high. They will turn out architectural and structural iron work and wire work. They are in the market for roofing, punch, shears and lathe. Their location

is Second avenue, between Fifteenth and Sixteenth streets.

The minor industries are yet cheerful and report enough work to keep them comfortably employed. There was some business that came in last week from the sugar country that was entirely unexpected. There is nothing in the way of items, though, deserving special mention.

J. M. K.

Inequality and Progress. By Dr. George Harris, professor in Andover Theological Seminary. Publishers, Houghton, Mifflin & Co., Boston and New York.

At the right time and in the right spirit Dr. Harris has offered a much-needed specific for many of the ills inflicted upon the American reading public in recent years. He opposes philosophy based upon historic truth to unscientific fiction of the future tense and illogical argument from a false premise. He matches common sense against absurdity, and, recognizing that society is not entirely sound, points out clearly the danger of blind following of figments of the imagination appealing to the passions and prejudices of men. In these days of single ideas for the redemption and reformation of the human race, with all its millions of diversities, and of loosely-jointed talk of equality of possession and equality of opportunity, it is refreshing to come across an assertion that "inequalities are so constitutional and persistent that the hope of progress cannot lie in the expectation of obliterating or greatly reducing them, but lies in the expectation of utilizing and harmonizing them." To show that is the purpose of Dr. Harris's volume. In phraseology epigrammatic at times, he unrolls his argument, full of the fruits of research, observation and meditation, recognizing the mutual relations of democracy and Christianity, and not hesitating for an instant to puncture notions accepted without thought among many persons by such plain statements of facts as that opportunities can be equal only if men are equal or that progress is the increase of legitimate wants which can be satisfied. The author's chapter on aristocracy and democracy condenses in few words a mass of wisdom and close definition as grateful as a well spring of water after long journeying in a barren and dry land. Cultivators of that species of American inflation known as popular education will doubtless be shocked when they read that "the fact that the great majority of boys are to be mechanics, farmers, operatives and day laborers, and that the great majority of the girls are to be wives of workmen, and will have to work, sweep, make beds and sew or become typewriters, saleswomen, dressmakers and milliners, has not yet distinctly dawned on the mental horizon of educators." But persons who have carefully traced the ill effects of the degeneration of a beautiful theory into a practical promotion of fads worse than useless will rejoice that some one of standing has dared to speak the truth in love about a subject which vitally concerns the future of America. This combination of sincerity and bravery is not the least attractive feature of "Inequality and Progress." It is a timely work; it is well conceived and well wrought out; it will be helpful to humanity.

In Western Tennessee

Milan, Tenn., October 21.

Editor Manufacturers' Record:

Our little town of 2000 inhabitants is in line with other progressive towns in West Tennessee. We will soon have completed a modern system of water works and electric lights. Humbolt, an enterprising town ten miles from us, is enlarging her system of water and lights. Trenton, in the same county, fourteen miles from here, has had for twelve

months in operation water works and electric lights. We have in our town a large shook factory, flour mill, planing and saw mills. Our location at the crossing of two trunk railroads—the Louisville & Nashville and Illinois Central—makes this a desirable place for manufacturers to locate, besides being in close proximity to raw material.

E. N. STONE.

Southern Coal for Mexico

According to a dispatch from Birmingham, Ala., W. H. Hughes, coal inspector of the Louisville & Nashville Railroad, has succeeded in securing contracts for 100,000 tons of Alabama coal for use on Mexican railways, and for other purposes. Several weeks ago the Manufacturers' Record referred to the shipment of this coal to Mexico for trial purposes. It is understood that the result of the trial was so successful that it resulted in orders for the quantity mentioned. The bulk of the coal will be shipped to Mexico by way of the Louisville & Nashville and Pensacola, Fla.

DISPLAY OF MACHINERY

The Special Exhibition Opened at the Philadelphia Bourse.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., October 27.

The special machinery exhibition in Machinery Hall of the Philadelphia Bourse opened this week, having many of the most prominent manufacturers of machine tools in the country represented. Some have their exhibits installed and others are in the course of erecting them. At the Fourth street entrance of the Machinery Hall the Brown & Sharpe Manufacturing Co., of Providence, R. I., has one of the finest exhibits ever put up for a like purpose, having 200 square feet of space on floor for the display of its latest types of universal milling machines, screw machines, with automatic wire feeds, and its universal grinding machines, making an exhibit in itself that attracts all mechanics. In addition to this it has an 18-foot six-inch showcase filled with its full line of small tools, cutters for gear wheels and for taps, reamers, twist drills, irregularly-formed parts of sewing machines and gun parts, milling and screw-slotting cutters, surface plates, micrometer calipers, scales for accurate weighing by ten-thousandths of a pound, etc. Two large wall cases are filled with United States standard rules, straight edges, standard caliper gauges, limit gauges, try squares made of cast steel. On the end of its platform stands a large and handsome revolving stand containing about 100 photographs of the different machines manufactured by this company, no two alike. This is a study in itself; in fact, it is well worth the time for anyone interested in machine tools to visit this permanent exhibition to see this one firm's display.

On the adjoining stand to the Brown & Sharpe Manufacturing Co.'s, the Hendey Machine Co., of Torrington, Conn., has a very handsome show of its lathes, planers and pillow shapers. The wall back of this exhibit is tastefully arranged with the firm name and a number of photographs of the different departments of its factory at Torrington, Conn. Its hustling sales agent will tell you that on one of the Hendey lathes one motion of the hand gives every feed and thread in daily use, and with lathe in use. He also exhibits samples of work done on this lathe, which are really wonderful. Then he will tell you of the micrometer adjustment of its pillow shaper, and its many other advantages. These two exhibits are in charge of Mr. J. W. Cregar, who has his desk on the same platform

and proves himself willing at all times to give the fullest information in regard to the latest improvements in machine tools and the several other lines he has charge of at this exhibition, among them the exhibit of paper pulleys, manufactured by the Rockwood Manufacturing Co., of Indianapolis, Ind. This pulley has been tested by the Franklin Institute, of Philadelphia, who find that it transmits four times the power of iron pulleys and double that of wood pulleys. Mr. Cregar also represents the Mossberg & Granville Manufacturing Co., of Providence, R. I. It manufactures a full line of single and double-acting power punching presses, broaching, drop, foot and screw presses, rolling mills fitted with patent roller bearings, tire-drawing machinery, rotary slitting machines, swaging machines, milling machines, sensitive drills and all classes of special machinery. In Braun's differential screw clamp coupling Mr. Cregar has one of the best shaft couplings on the market.

C. B. Cottrell & Sons' Co., 41 Park Row, New York, has on exhibition one of its four-roller pony presses for fine book and catalogue work. This machine is driven by direct motor attachment, and will be kept running under actual working conditions and on miscellaneous work. Its greatest feature is the large variety and vast amount of work it is capable of doing.

Another sign reads "Nothing like it. Monarch water heater; gives you hot water in thirty seconds after starting heater, and continues to give you all the hot water you can use as long as you keep the spigot open." It is run by gas, and only burns the gas while you are drawing the water. It is put up in cellar and attached to the hot-water system of your house, hotel, club, laundry, church or factory. Then all one has to do is to open a hot-water spigot in any part of the house and you get your hot water. You get hot water any time, day or night, by simply opening the spigot in any part of the house. It only costs six cents a day for a family of twelve to give them all the hot water they can use in laundry, bathroom and kitchen. With this heater it is impossible to have an explosion. J. W. Cregar has sales agency. The heater is shown in operation.

A new carpet loom in operation is shown by the M. A. Furbush & Son Machine Co. weaving the new Arras tapestry. This exhibit attracts crowds all day.

Mr. J. Calvin Hess, sales agent, shows a full plant in operation making hosiery and underwear. He has one of the most interesting exhibits in the hall, showing gas and steam engines, dynamo and motor in actual use, and the very latest hosiery and underwear machinery in use making goods for the market.

The Otto Gas Engine Co. has an exhibit of three of its gas engines in operation. Many other exhibits are worthy of mention, but space does not permit; will give additional account next week.

The Bourse will be kept open every Wednesday evening until 10 o'clock, and they may keep it open two evenings each week.

The sales agents in the hall report sales made to people from all parts of the country. One party from Wisconsin bought many thousands of dollars' worth of machinery to equip a new factory. He found all he wanted right in the Bourse exhibition, and saved his time and expenses of traveling to the different home plants of the concerns represented. Another party from Birmingham, England, left an order for over \$3000 for machinery, and remarked that it saved him a trip down East. The exhibits attracts buyers from all over the country.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Southern Railway Commended.

The recent report of the Southern Railway Co. has been made the subject of an exhaustive analysis by the Daily Stockholder, of New York, which draws a number of favorable conclusions from the statistics given by President Spencer. While, as stated in the analysis, business is not as good as could be wished, it covered a period in which there was considerable depression, and on the whole is extremely gratifying. Among the comments are these:

"The move to set the system right, that portion of it which was worth keeping, has been prosecuted with as much vigor as was displayed in laying bare the actual condition into which the entire outfit had fallen. There has been a change, such a one as to efface almost entirely the old conditions. It has cost money, but the money has been well spent, and there can be but little doubt that with the growth of population, the development of the territory covered and the natural increase in traffic the future of the Southern will justify the expectations of its most enthusiastic friends. * * * From July 1 to September 30, it may not be amiss to state, the Southern Railway has increased its gross earnings \$339,992, or 7 per cent., and this in spite of some interference to traffic owing to the yellow-fever outbreak. Industries are multiplying along the company's line, sidetracks have been built to a number of industrial establishments, and the improved general conditions are bringing more traffic to the road. Financial affairs are satisfactory, details concerning these in the report leaving nothing to be desired in the way of clear statement."

The article also highly compliments the company on the result of its excellent and economical management.

Electric Motors on a Steam Railway.

A. M. Pennock, an electrician at Chattanooga, Tenn., has made a proposition to the Chattanooga, Rome & Southern Railroad Co. which will doubtless attract considerable interest in railroad circles generally. This is to utilize a portion of this road, which is now operated by steam power, for electric motors. The road extends to Chickamauga Park, a few miles from the city, and it is proposed to introduce a system on this section of the road which will allow the operation of electric motors upon it, but will not interfere with the running of steam locomotives. If this is successful, the construction of an extra track between Chattanooga and Chickamauga Park will be obviated, and the only extra expense involved will be the electric equipment. As a large number of steam railroads in the country could utilize electric motors to advantage on portions of their systems, especially in or near large cities, if the Chattanooga experiment proves successful it will probably be adopted at many other points.

Springfield, Little Rock & Gulf.

According to a dispatch from Little Rock, Ark., the Springfield, Little Rock & Gulf Railroad Co. has practically decided to begin construction work at an early date. At a meeting of the company, held in that city, it was determined to issue first mortgage bonds to the amount of \$14,000,000 to finance the construction of this road, which, it is claimed, will be 700 miles in length, of which 145 miles will be constructed in

Arkansas. It is intended to form a new system between Arkansas and tidewater on the Gulf of Mexico, and will terminate at a point in Louisiana, where a railroad connection to the seaboard can be secured. J. A. Hinsey, of Chicago, is president of the company, and W. B. Worthen, of Little Rock, one of the directors. Other officers are J. H. Bouslog, of Springfield, Mo., treasurer, and P. J. Dougherty, chief engineer.

Steamships to Southern Ports.

The decision of the Ocean Steamship Co., of Savannah, to have daily sailings between New York and Savannah gives this company the honor of having the longest daily steamship service in the world. Up to this time the Old Dominion Steamship Co. has had this credit. The decision to increase the service between the cities mentioned was caused by the necessity for more facilities for handling the business.

New York advices state that other steamship companies having vessels between New York and Southern ports consider the outlook for business very bright in spite of the temporary interruption to traffic caused by yellow fever. The Old Dominion Company has recently added a large steamer to its fleet.

A Traffic Agreement.

The South Carolina & Georgia Railroad Co. and the Ohio River & Charleston Company have made traffic arrangements by which train service has been established direct between Charleston and points on the Ohio River & Charleston as far as its northern terminus, which is Marion, N. C. Under the new arrangement a through train will be run over the South Carolina & Georgia to Camden, thence over the tracks of the Ohio River & Charleston. Arrangements have also been made for increased facilities in shipping freight.

Mr. Turk Elected President.

At the annual meeting of the American Association of General Passenger Agents, W. A. Turk, general passenger agent of the Southern Railway Co., was honored with the election of president. The association is one of the leading transportation organizations in the country, and has a very large membership. Most of the important lines of the country are represented in it. The election of Mr. Turk is a deserved compliment to his ability and high standing in railroad circles.

A Profitable Branch.

The freight business on the Western Maryland Railroad is extremely heavy, and on the western division fully 300 carloads are being handled daily, especially on the Potomac Valley branch, which connects with the Baltimore & Ohio at Cherry Run, W. Va. This line was built upon the suggestion of President Hood, and forms a short line connecting the Philadelphia & Reading and the Baltimore & Ohio. It has proved extremely profitable to the company.

Railroad Notes.

The Nashville & Decatur Railroad Co. has elected D. B. Cliffe, of Franklin, Tenn., president, and Samuel Seay, secretary.

At the annual meeting of the Georgia Southern & Florida Railroad Co., held at Macon, Ga., Samuel Spencer was elected president; William Checkly Shaw, vice-president, and Benjamin C. Smith, secretary and treasurer.

The Southern Railway Co. has recently opened a new office in Baltimore

at the corner of Baltimore and Calvert streets. It has been handsomely furnished and prepared especially for the business of this corporation.

At the annual meeting of the Baltimore & Washington Car Service Association, held at Baltimore, George C. Wilkins, general agent of the Northern Central Railroad Co., was re-elected president, and W. L. Gardner, secretary and manager.

The Missouri, Kansas & Texas Railroad Co. is considering the idea of using a combination freight car, which can be utilized either for ordinary freight or for live-stock. The car can be changed from one kind into another in a half-hour, and is the invention of S. Dunn, of New Franklin, Mo.

The annual meeting of the Columbia, Newberry & Laurens Railroad Co. resulted in the re-election of the board of directors, which includes Messrs. R. C. Hoffman and E. St. John, of the Seaboard Air Line; H. Walters, W. G. Elliott and J. R. Kenly, of the Atlantic Coast Line. President Childs was also re-elected.

It is announced that arrangements have been made by the Catonsville Short Line Railroad Co., of Baltimore, and the Pennsylvania Railroad, whereby the latter will continue its operation of the Short Line for another year. This road extends from Baltimore to Catonsville, in the suburbs, and has been operated by the Pennsylvania under a lease.

The report of the Northern Central Railroad Co. for the month of September shows an increase over the corresponding period of 1896 of nearly \$55,000, the net earnings for the month being \$253,955. The net earnings for the nine months ending September 30 amounted to \$1,481,089, or \$370,000 more than for the corresponding period of 1896.

Wesley M. Oler and Wm. C. Eliason, of Baltimore, and Thomas Hopper, of Havre de Grace, Md., are interested in a company which has been formed to operate a line of steamers between Baltimore, Port Deposit and Havre de Grace. It is to be known as the Port Deposit & Havre de Grace Steamboat Co. of Baltimore, and is to have a capital of \$55,000.

As an indication of the marine business at Galveston, Texas, a few days ago fifty-eight steamships were in the harbor in addition to several large sailing vessels. The steamers are loading cotton, cottonseed meal, grain and other cargo, and are lying two and three abreast at the wharves. They are destined for miscellaneous European ports.

A number of Southern steamships loaded with cotton and other cargoes for Europe have recently called at Baltimore to secure necessary fuel for the trip across the Atlantic. This business has been monopolized by Norfolk and Newport News in the past, but it is stated that coal firms owning terminals at Baltimore have made such a price that it is to the interest of many steamship companies to coal at the latter city, in spite of the delay caused by the trip up Chesapeake bay.

J. T. Crass, president of the Chattanooga & Lookout Mountain Railroad Co., also of the Lookout Incline & Lulu Lake Railroad, in a letter to the Manufacturers' Record states that the Lookout Mountain Railroad is now in his control, and the company has been rechartered. He confirms the report that this line is to be extended for the use of electric motors, a distance of five miles. The extension will probably bring it to Lula Lake, in the suburbs, and will be built some time next year.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

ROUND BALE ABROAD.

Strong Commendation from a Large European Importer.

It is a well-recognized commercial principle that the foreign buyer or the final taker of any export article is the man whose views must be met by the seller. This is especially true of cotton. For years complaints have been made about the condition of American cotton in European markets. The necessity for an improvement in baling has been emphasized time and again. The new cylindrical bale is designed to meet the demand for a better package, and those cotton handlers who have been led into opposition to this latest advance in baling will doubtless appreciate the significance of the facts contained in the following letter. It is from Francesco Parisi. He is at the head of a large importing house, with chief office at Trieste, and branches at Vienna, Prague, Eger, Ala, Munich, Venice, Genoa and Undine. During the year ended September 1 of 144 cargoes of American cotton arriving at Genoa there were only eleven in which the bulk of the bales carried was not consigned to him. Of a total of 277,415 bales in the cargoes 150,981 were consigned to him. As a cotton king of Europe his words have the weight of authority. Referring to a consignment of cylindrical bales which reached Genoa by the steamship Istria in September, he writes as follows:

Genoa, the 2d of October, 1897.

"To Mr. Herbert D. Martin, Representative of the American Cotton Co. of New York—Genoa:

"Dear Sir—This is to inform you that, in the company of Mr. H. Kuhn, of this place, I have personally superintended the weighing and sampling of the consignment of round bales arrived here per steamship Istria, and enclosed I beg to hand you the weight slip of these bales, showing a total of Kg. 4722.5, equal to 10,414 pounds.

"My packer, in my presence, sampled several bales, and I can safely say that the sampling of the round bales is as easily done as under the old system, the samples drawn being in prime condition and equal to any I have ever seen. Without the use of an instrument I succeeded in going through five layers, and could have gone farther if requested or necessary.

"The bales easily can be reconditioned by a few stitches, and will load on the wagon without the lint being exposed.

"As regards the expenses of repairs, they are less than under the old system, and the same number of men can handle much more bales in the same time.

"I congratulate the American Cotton Co. on the neatness of the packages on arrival, all the marks and numbers being easily distinguished on each bale, and I can recommend those bales to all spinners, being sure that the round bales they receive will always be in a splendid condition. I remain, dear sir,

"Yours very truly,

"FRANCESCO PARISI."

Textile Notes.

The erection of a cotton mill at Durham, N. C., is contemplated by Julian S. Carr and others, of that city.

The Worth Manufacturing Co., of Worthville, N. C., intends to add 500 spindles to its mill in the near future.

The Hadley People's Manufacturing Co., of Siler City, N. C., is now making

arrangements to increase its equipment of 2000 spindles.

The Buffalo Manufacturing Co., of Stubbs, N. C., a mill of 2106 spindles, intends doubling its capacity next year.

The Georgia Manufacturing Co., of White Hall, Ga., operating a mill of 8320 spindles, will put in 3328 additional in the next six weeks.

The Minneola Manufacturing Co., of Gibsonville, N. C., intends to add some new looms to its mill, now operating 2000 spindles and 168 looms.

The Eford Manufacturing Co., of Albemarle, N. C., expects to double its equipment in the coming spring. The present equipment consists of 5000 spindles.

The Linden Manufacturing Co., of Davidson, N. C., is considering putting in four new spinning-frames and a corresponding amount of roving machinery.

The Globe Cotton Mills, of Augusta, Ga., contemplates increasing its equipment about capacity. The company has 2000 spindles and ninety-six looms in operation now.

The Steele Mills, of Rockingham, N. C., contemplates increasing its equipment of machinery about 50 per cent. The company now has 11,200 spindles and 300 looms in operation.

The Oneida Cotton Mills, of Graham, N. C., will add 4000 spindles to its mill and have them in operation by December 1. The mill is running 4424 spindles and 463 looms at present.

President N. E. Harris, of the Georgia Technological School, announces that the next legislature of Georgia will be asked for an appropriation to add a textile department to the institution.

The Cherry Cotton Mills, of Florence, Ala., expects to expend about \$8000 or \$10,000 in adding cards and other machinery to its plant. The company now has 12,000 spindles in operation.

The Rock Hill Cotton Factory Co., of Rock Hill, S. C., expects within the next year to put in 2000 spindles and fifty looms additional; company now has 7904 spindles and 192 looms operating.

The Eno Cotton Mills, of Hillsboro, N. C., is now putting in 1250 twister spindles, and expects to commence operations by November 8, running day and night in order to catch up with orders now on file.

The Kesler Manufacturing Co., of Salisbury, N. C., intends next year to add some new machinery to its 5000-spindle mill. Either 5000 new spindles will be added or 150 looms installed; D. R. Julian, manager of the company.

In Textile America for October 23 Col. A. B. Shepperson, of New York, has an article on the undue depression in cotton, in which he says, regarding present conditions: "It is perfectly evident to me that sooner or later a reaction must come. It is only a question of time, and the greater the distance the greater will be the rebound. It is always so."

It is proposed to erect a cotton mill at Acworth, Ga., and a company will be organized by the citizens. Among those interested are H. P. McLain, who is acting as secretary of the movement; Orlando Awtry, D. A. Smith, J. L. Lemon and others. Plans for buildings are now ready, to be able to accommodate 4000 spindles at the start. The capital stock is contemplated as to be \$100,000.

The St. Louis Cotton Exchange has elected W. M. Senter, president; Duncan Joy, vice-president; E. P. Horner, William Duncan, J. D. Goldman, C. M. Saffarone, R. F. Phillips, E. Baker and Richard Upshaw, directors.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., October 26.

There is nothing of interest to report with regard to the cotton-oil market, although prices are slightly firmer. Trading is less active than a week ago, although considerable business has been transacted in crude in Texas and nearby Atlantic points. At Gulf ports the yellow-fever embargo still makes business very difficult, and only a small trade has been reported this week, though quarantine has been raised at Galveston, so that shipments are now moving from there to New York on old engagements, one steamer leaving there yesterday for New York with a fair amount of oil on board. Prices now being made for seed are more favorable to the crusher, and it is worthy of note that the latter is offering oil less freely than heretofore. Lard is slightly firmer, 4.65 cents being quoted January delivery, Chicago, the increased demand indicating higher prices. Tallow is dull and spiritless, owing to the keen competition of New York city melters, the general quotation being 3½ cents. There is very little doing in compound-lard manufacture, as evidenced by the absence of manufacturers from the market, and not until the expected improvement in lard need we expect a materially increased demand for cotton oil in this connection. In consequence of the conditions referred to, receipts of oil are still light, and it is expected that the removal of the embargo will see plentiful supplies at this market. This may have a tendency to weaken prices, especially since the export demand is much slower than was anticipated. It is rumored that a large crop of Egyptian seed will be forthcoming this year, the correspondingly low price of which would have a tendency to reduce the price of English oil, thus to a certain extent interfering with the volume of future exports from this source. The rumor lacks confirmation, however. Exports for the week aggregate 4800 barrels, and arrivals 3800 barrels. Very little business is doing in butter oil, but a fair local trade prevails in white oil. Considerable quantities of oil are yet on this side awaiting shipment already contracted, the high ocean freights checking transportation for the time. The following are closing prices: Crude, 20 cents; crude, loose f. o. b. mills, 14½ to 17½ cents; summer yellow, prime, 23½ to 23¾ cents; summer, off grade, 22½ to 23 cents; yellow, butter grades, 27 to 29 cents; white, 26½ to 27 cents; white winter, 29 to 31 cents; winter, yellow, 28 to 31 cents; salad oil, 29 to 31 cents, and soap stock ½ to ¾ c. per pound. Liverpool refined is quoted at 15s.—dull.

Cake and Meal.—The volume of sales is increasing, although the export trade is yet very much restricted. Prices of cake in England are advancing. The yellow-fever scare has undoubtedly been the means of inflicting very serious losses to the South in the cake as well as in the oil line. It is worthy of note that a gentleman connected with mill feeding stuff interests in England, Mr. James H. Bowman, of the well-known Liverpool firm of G. C. Dobell & Co., sailed for England on Saturday, terminating a very unsatisfactory business trip. Mr. Bowman was prepared to contract for cake to the extent of from 50,000 to 75,000 tons, but owing to having been prevented from visiting the leading cake-producing centres by the prevailing quarantine regu-

lations, practically no purchases were made.

Cottonseed-Oil Notes.

The Sherman Oil & Cotton Co., of Sherman, Texas, shipped on the 21st a solid trainload of cottonseed oil to Galveston for export. The train consisted of twenty-two cars, each car containing forty-five barrels, or a total of 1000 barrels of the product.

The following foreign exports of cottonseed products from the port of Galveston, Texas, were reported last week: For Liverpool 2130 sacks of cottonseed oilcake and 10,763 sacks of meal; for Bremen 2240 sacks of meal, and for Havre 237 sacks of oilcake and 2800 sacks of meal.

At a meeting of the Cottonseed Crushers' Association, held at Dallas, Texas, on the 18th inst., the attention of the association was called to the appointment of a special commission by President McKinley, with powers to carry into effect, the reciprocity provisions of sections 3 and 4 of the tariff act. The secretary of the Texas Cottonseed Crushers' Association was instructed to take up the French increased duty with the special commission, and also to meet the commission at Austin in regard to proposed changes in freight rates.

Receipts of cottonseed at Memphis are very heavy at present. Seed has accumulated on the river banks at different landings faster than steamers could carry it, and as the high price of \$9 per ton has been paid seed has been rushed to market in large quantities. The offerings have been so excessive that the price has declined to \$8, and even at that price there seems to be no limit to the supply. Prices on the 25th were \$8 per ton in bulk by rail and wagon, and sacked seed by river \$7.50. Cottonseed products are unchanged; prime crude oil, 17 cents; prime summer yellow oil, 20 to 20½ cents; choice cooking summer yellow, 26 to 28 cents; prime cottonseed meal in car lots, \$15.50 to \$16 per ton.

The market for cottonseed products in New Orleans is quiet, with values easy. Prices show no material change during the past week. Receivers' prices are reported as follows: Cottonseed, \$8 per ton of 2000 pounds net to the mills, no commission of any kind to be added; cottonseed meal jobbing per carload at depot, \$17 to \$17.70 per short ton of 2000 pounds; for export per long ton of 2240 f. o. b., \$19.25 to \$20.25; oilcake for export, \$19.25 to \$20.25 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, strictly prime in barrels per gallon, 18 to 18½ cents; loose, per gallon, 15½ to 16 cents, according to location of mill; refined cottonseed oil, prime in barrels per gallon at wholesale or for shipment, 23½ cents; cottonseed hulls delivered per 100 pounds, according to location of mill, 10 to 15 cents; linters, according to style and staple—A, 3¾ cents; B, 3½ cents; C, 2¾ to 3 cents; ashes, none.

New Steamship Launched.

The steamship Miami has been launched at Philadelphia for the company which has established a service between Nassau, in Bahama Islands, and the terminus of the Florida East Coast Railroad Co. The Miami is very handsomely finished. She is 240 feet long and forty feet beam, and has accommodations for 120 passengers, containing three tiers of staterooms. The power is obtained by two triple-expansion engines, each of which operates a screw. The vessel has an incandescent-light plant, is heated by steam and has all modern conveniences.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.**Baltimore.**

Office Manufacturers' Record,
Baltimore, Md., October 28.

The inclement weather of the past week has had a depressing effect upon the local lumber market, and the volume of business has been limited. Receipts of lumber have also been lighter than usual owing to the detention of vessels by adverse winds in the bay. There is, however, an ample supply of lumber to meet the present light demand, and prices continue to rule about steady for air-dried yellow pine. Planing mills, box factories and other woodworking concerns are only purchasing in small quantities to supply immediate wants. The market for kiln-dried North Carolina yellow pine is firm, with a moderate home and foreign inquiry. Values for all desirable grades of kiln-dried lumber are a shade better, with stocks not excessive in any case. Cypress is dull, with prices steady. There is a good demand for white pine, and the market has shown more activity than usual during the month of October. The hardwood market is fairly steady, with some demand both from local and out-of-town buyers. The export business continues quiet, with shippers not operating to any great extent at the moment.

Savannah.

[From our own Correspondent.]

Savannah, Ga., October 25.

During the week under review the lumber market here has continued to show considerable activity, and the shipping business of the port generally is unusually active. The lumber industry at all nearby ports and at milling centres in this section of the State continues to show many favorable features. There is a good local and coastwise demand for wood products, and the various saw mills along the lines of railroad terminating here are well supplied with orders. Prices continue firm for all desirable grades of lumber, and for common stock values are steady. The cross-tie industry continues to improve, and there has been an active inquiry for all desirable stock. On Saturday last the market closed firm, with values as follows: Ordinary sizes, \$10.50 to \$11; difficult sizes, \$12 to \$14; flooring boards, \$15 to \$17; shipstuffs, \$14.50 to \$18, and sawn ties, \$9.50. Among the clearances during the week the following vessels were reported: Schooner Viola Reppard for Boston with 352,000 feet of pitch-pine lumber; schooner George H. Ames for New York with 357,914 feet; steamship Bona for Barcelona with 19,189 feet of lumber, 6241 staves and other cargo; schooner Harry A. Berwind for Philadelphia with 938,857 feet of lumber, and schooner Annie T. Bailey for the same port with 13,047 feet. New York steamers cleared with over 400,000 feet of lumber, and Baltimore steamers with 220,000 feet. Lumber and timber freights are firm at unchanged rates. Foreign business is more or less nominal. The rates from this and nearby ports of Georgia are quoted at \$4 to \$4.50 for a range including Baltimore and Portland, Me. Among the charters reported in New York last week were the following: Schooner Henry Clausen, Jr., 473 tons, from Savannah to New York with piling on private terms; schooner Nelson Bartlett from Brunswick to New York with lumber at \$4.62½; a Swedish bark, 800 tons, from Brunswick to Rio Janeiro

with lumber at \$13.25 net, and schooner Flora Rogers from Brunswick to Portland with lumber at \$4.87½.

Charleston.

[From our own Correspondent.]

Charleston, S. C., October 25.

Business, both at this port and all nearby milling points, is fairly active, and the lumber industry is generally regarded as improved in many of its various departments. There is a better demand for lumber from the usual sources, and prices for all desirable grades are generally firmer. At Georgetown there is quite an active movement among shippers, and mills are generally well furnished with orders. On the 21st inst. the schooner William Linthicum sailed from that port for New York with a cargo of lumber from the Gardner & Lacey Lumber Co., and the schooner Josiah Linthicum for Baltimore with a full cargo of lumber from the George Officer Co. at Eddy Lake. On Saturday last there were twenty-two schooners in the harbor of Charleston, besides twelve large cotton steamers, and the general business of the port is of unusual volume for this period of the season. The lumber market on Saturday closed firm, with prices as follows: Merchantable lumber, \$14 to \$16 for city-sawed, \$12 to \$14 for railroad; square and sound, \$9 to \$13 for railroad, \$8 to \$11 for raft; dock timber, \$4.50 to \$6.50; shipping, \$8.50 to \$10.50. There is a good demand for shingles at \$5 to \$7 per thousand. The following New York steamers cleared last week with general cargoes: Algonquin with 24,005 feet of lumber, Comanche with 4759 feet and Seminole with 73,587 feet. The schooner Millie R. Bohannon cleared for Boston with 501,000 feet of lumber, and the steamship Delaware for the same port with 13,898 feet. The domestic shipments of lumber from this port since September 1 amount to 4,681,063 feet of lumber, against 8,273,024 feet for the same period last year. Coastwise lumber freights are not materially changed, and rates are very low. Lumber to New York is quoted at \$4.38 to \$4.50; wet ties to Perth Amboy, 15 cents, basis forty-six feet, and dry railroad ties to New York, 11½ cents, basis thirty-six feet, and lumber to Fall River, \$4.50.

Mobile.

[From our own Correspondent.]

Mobile, Ala., October 25.

The volume of business at the moment in both lumber and timber is limited, but there seems to be somewhat more activity in the general market, and manufacturers and shippers look for a better business during November. The timber market is generally firm for both hewn and sawn stuff, and the demand is a shade better from the European markets. In lumber the better grades are all a shade higher, and orders are beginning to come in more frequently. Mills are generally running on full time, and shippers expect to extend their business considerably during the winter months. The Robinson Land & Lumber Co. shipped last week a cargo of 352,361 feet of pitch-pine lumber to Macoris, St. Domingo, and Martin Taylor & Co. 2,000,000 feet of lumber and timber to Trieste, Austria. The brig Kjaratan cleared with 241,981 feet of lumber for Vera Cruz; schooner Dyer with 3000 feet for Ruatan, Spanish Honduras, and schooner Smith with 71,000 feet for Belize, British Honduras. Freights on lumber are steady. To the West Indies, \$6 to \$7 per M; coastwise, \$5.25 to \$6; Cuba, \$6 to \$7; River Platte, \$11 to \$12; Mexico, \$7 to \$9. Among the charters reported in New York last week were the following: A Norwegian bark, 538 tons, from Pensacola to Rio Janeiro

with lumber at \$14 net, and schooner C. E. Hall, 375 tons, from Pensacola to New York with lumber at \$5.75.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, October 23.

Shipments of lumber have been going from local yards in good volume during the past week, and the congestion of freight at the various yards is relieved. Local mills have received good additions to their order lists during the week, and, although there has been some loss due to delay in receiving orders and proposals, a very fair volume of business has been maintained, and the outlook is sufficiently encouraging to assure a good fall trade.

Business with the North and West is offered in good volume, and, although the Texas trade is not flush, prices continue firm and manufacturers report good prospects ahead.

The export trade has been light of late, but a better movement is anticipated, and exporters are preparing to rush along shipments and make up for lost time.

The Warren Land & Lumber Co. is preparing to resume operations, and has closed contracts for several million feet of logs.

Lumber Notes.

The Richmond Cedar Works, at Fulton, opposite Richmond, Va., has completed the new addition to its factory, and will add to its extensive list the manufacture of trays.

The Nebraska Lumber Co., at Doughty, Texas, has a large round and hewn timber contract for export via Sabine Pass, and will fill same while rebuilding its mill recently destroyed by fire.

The George M. Griffin Lumber Co., of St. Louis, filed articles of incorporation last week, with a capital stock of \$5000, all paid. The incorporators are George M. Griffin, B. S. Griffin and D. D. Fassett.

Messrs. E. P. Jones and J. R. Saunders, of Valdosta, Ga., have purchased from the Dutch Syndicate 150,000 acres of timbered land near St. Andrew's Bay, Florida. It is stated that the land will be opened by turpentine men and naval store operators.

The handle factory of E. Jackson, at Springfield, Mo., was burned on the 18th inst. The loss is estimated at \$13,000; insured for \$7000. All the machinery and about two carloads of handles, besides a large amount of supplies, were consumed. He will not rebuild at present.

The Southern Pine Lumber Co., of Savannah and Brunswick, Ga., has petitioned the city council of the latter city for leave to build and extensively improve its recent purchase of dock property. The company has already invested \$16,000, and the additional improvements will amount to \$10,000 more.

The large planing mill of the Cain Lumber & Manufacturing Co., at Cordele, Ga., has commenced operations, and is now running on full time. This company has recently been reorganized and the capital stock increased, while its extensive milling plant is thoroughly equipped with every modern appliance.

At Village Mills, Texas, the saw-mill plant is making full time, now that the quarantine trouble is over. Since the resignation of J. F. Keith as vice-president of the Texas Tram & Lumber Co. at Beaumont, E. A. Fletcher, of Village Mills, has been promoted to fill that position, with H. H. Wickline, superintendent.

The owners of more than one-tenth of

the capital stock of the Greenleaf Johnson Lumber Co. have called a meeting of the stockholders, to be held at the office of the company in Norfolk county, Virginia, on the 24th of November. A meeting of the Cashie & Chowan Lumber Co. will be held on the same day at the same place.

The secretary of the Mechanics, Dealers and Lumbermen's Exchange of New Orleans reports the following receipts of building material at that port for the week ending October 22: Lumber, 1,288,000 feet; shingles, 620,000; laths, 25,000; oak staves, 44,400, and cypress staves, 158,000. The receipts of lumber for the season of 1896-97 amount to 17,221,000 feet, against 16,522,000 feet last year.

The Warren Land & Lumber Co., of Warren, Texas, which has not been operating for some months, is preparing its extensive plant for an early resumption of operation. The company has contracted with the Yellow Pine Company, who owns the tram railroad running out of Warren, for the delivery of 4,000,000 feet of logs. The Warren Land & Lumber Co.'s mills are among the largest in that section.

It is stated that J. H. Anderson, of Bridgeport, Ala., is about to become owner of the large saw-mill plant at that place now owned by Frederick Aldhous, of New York. In connection with the mill proper will be operated the Hardwood Manufacturing Co. and the Harri-man Axe-Handle Factory, separate buildings for each to be erected. Both companies will use lumber cut by the saw mill.

It is understood that H. A. Johnson, of Chattanooga, Tenn., and Col. W. Ketchum, of Burlington, Iowa, contemplate erecting an extensive lumber plant either at Loudon, Chattanooga, Tenn., or Hazel Creek, N. C. It is also stated that these gentlemen, with Capt. R. N. Archer, have a charter authorizing them to clear out the Tennessee river from the Tennessee & North Carolina to the North Georgia Railroad, and erect splash dams for the purpose of floating timber down the Tennessee river.

The following vessels cleared last week from Jacksonville, Fla., with cargoes of wood products: Steamship Iroquois for New York with 300,000 feet of lumber and 2000 bundles of shingles; schooner J. W. Balano for Providence, R. I., with 421,000 feet of pine lumber; schooner Thomas Winsmore for Philadelphia with 148,000 feet of pine lumber, 20,000 feet of cypress lumber, 83,000 shingles and 30,000 feet of lumber of a different consignment. The schooner Adele Ball cleared for New York with a full cargo of lumber.

Plea for Roanoke.

Editor Manufacturers' Record:

Roanoke offers exceptional advantages for a government armor plant. It has furnaces to manufacture basic or acid pig iron, for steel-making purposes. It has cheap iron ores. It has Pocohontas coal. The armor plate is but 257 miles from Newport News and Portsmouth Navy Yard. It is not much further to the Cramps than the Carnegie Steel Co. Manganese for speiseleisen is nearby.

E. B. WILSON.

Salem, Va.

The Commercial Club of Jefferson, Texas, has published in pamphlet form copies of the petitions and correspondence in the matter of opening of navigation to Jefferson through Cypress bayou and Caddo lake to the Red river by means of locks and dams and other government improvements.

MECHANICAL.**A MODERN PLANT.**

The York Manufacturing Co.'s Enterprise, Which Is an Object-Lesson to Promoters of Industries.

In a recent issue of the Manufacturers' Record the superior quality of ice manu-

company pays no insurance except upon its patterns, and thus a saving of fully \$2500 in premiums is effected annually. The outer walls are of brick, substantially built and braced to meet all requirements. The roofing is of slate, is fastened by copper wire instead of nails, which practically makes it permanent. The interior architectural work, posts, etc., are of metal, the shops being built by

ery are as fully up to the standard as the other parts of this industry. The equipment includes lathes, drills, punches, planers and benders of various sizes, and it is noticeable that they are from the most noted machine works in the country, such as the Niles Works, of Hamilton, Ohio. Electricity is utilized especially in conveying heavy pieces of machinery from one portion of the building to the

Tracks for hand cars also extend to all portions of the plant, and everywhere arrangements are provided for transferring machinery and castings with as little trouble and in the shortest time possible, the company evidently realizing that time in this instance is indeed precious. While there are many plants in the country with a much larger area than that of the York Manufacturing Co., it is doubtful if any are more conveniently constructed with the view of saving space and time.

While the company has a capacity for turning out at least four 25-ton ice-making machines monthly, in addition to steam boilers, engines and other work, its horse-power required for all purposes is only 400. One 200-horse-power engine operates the machinery in the erecting shops and two others of fifty horse-power each are used for running the dynamos and for operating the other machinery. They were all made by the York Manufacturing Co., and can indeed be called models of steam apparatus. One feature which especially commends itself is the fact that no oil is required in the cylinders. This is owing to the quality of metal used, which prevents any friction whatever and allows the operation of the piston rod at a high rate of speed without heating or injury. This is an especially desirable feature in the manufacture of ice, as no cleansing or purifying operation is required in the treatment of the water. While these engines have all the features of the best type of standard apparatus, they include a number of specialties which are original with the company, and also have the merit of being very compact and running with remarkable ease and stillness. In addition to engines for ordinary work, the company also builds portable engines for agricultural purposes and for the use of contractors on public works. It is now engaged in filling an order for a firm in New York. This electric plant, which, as already stated, supplies a portion of the power and enables the company to have



MAIN MACHINE DEPARTMENT.

factured by the process of the York Manufacturing Co., of York, Pa., was referred to in detail, with the illustrations of some of the special apparatus for which this company has obtained an enviable reputation. Although it began operations as recently as 1896, this corporation finds a ready sale for its ice-making machinery, as well as engines, boilers, tanks and other specialties, over a large area of the South, while it is successfully competing with the Northern market as well as with some of the largest concerns in the country.

The York Manufacturing Co. is a remarkable illustration of what capital, energy and ability can accomplish when happily combined, as they are in this instance. This plant, which is located in the suburbs of the city known as West York, is within a stone's throw of the Pennsylvania and Western Maryland Railroad lines, which are connected directly with its principal buildings by a siding. The various buildings, occupying between three and four acres of ground, form what is truly a model industry. One sees everywhere the skill of the architect and builder displayed in arrangement of the various shops, the details of construction, the quality of material and the many improvements which are essential in an up-to-date plant.

The main buildings comprise an erecting shop 250x60 feet in dimensions, a machine shop of the same size and a wing 100x125 feet, a foundry 200x80 feet and a boiler shop 200x100 feet. These are arranged in the most convenient manner, the power being furnished in such a way that any portion of the plant can be operated independently of the others, thus economizing power to a very large extent. A special feature of the buildings is the fact that the principal ones are entirely fire-proof. It may be said here that as a result of this construction, the

the Wrought Iron Bridge Co., of Canton, Ohio. A noticeable feature is the large number of windows, which make the lighting system of the various buildings

other. To perform this work several cranes are employed, which have a capacity for lifting from sixteen to forty tons. By means of this apparatus huge



ERECTING DEPARTMENT.

almost perfect. In order to arrange for night work, however, the company has its own electric installation, by which the entire set of buildings or any section of them can be brilliantly illuminated by incandescent and arc lamps.

The extent and quality of the machin-

pieces of metal which would require hours to transfer from one portion of the shops to another are placed in any position desired in a few moments. Compressed air is used to a great extent in boiler and tank work, the company having a supply of very fine pneumatic tools.

its own illumination, consists of two dynamos, which represent 110 kilowatts. They are of the General Electric Co.'s pattern, and, like everything about the plant, combine the latest improvements.

To give an idea of the capacity of these works it may be stated that they can

turn out ice machines capable of producing anywhere from one to 1000 tons in twenty-four hours. They can also build twelve engines of twenty-five horse-power each week, although orders can be filled for work varying anywhere from one horse-power to 250 and over. The company gives employment to about 500 men when working on full time, and its weekly pay-roll averages over \$3500.

gine. This system becomes automatic through the use of a pump that is driven continuously from the valve motion, delivering oil into the tank. The pipes are so connected that direct pressure may be established on the supply pipes for the purpose of removing any obstruction.

The gravity system of oiling seems to have many advantages, for by pumping into a tank there is opportunity for the

ried back to the receiving tank by an overflow pipe. This arrangement insures an absolute flood of oil if desirable over the engine, as well as a supply of oil for the engine for a long run without the use of the pump.

Hydraulic Ram.

An improved hydraulic ram, for furnishing water for house, cattle, etc., is

of supply above the ram, and the elevation to which it is required to raise, determine the relative proportion between the water raised and wasted, the quantity raised varying according to the height it is conveyed with a given fall; also, the distance the water has to be conducted, and consequent length of pipes, have some influence on the quantity delivered at the point of discharge, as the more extended the pipes through which the water has to be forced by the ram, the more friction there is to be overcome by additional efforts on the part of the machine; notwithstanding rams are frequently and



THE FOUNDRY.

The buildings alone represent an investment of \$165,000, not including the machinery and other equipment.

While the company is capitalized at \$400,000, it may be said that it is an entirely home enterprise, the capital being contributed by local parties who have faith in the success of the enterprise and are firm believers in home industries. That their convictions were correct is shown by the fact that although the works began operation February 10, 1896, the company has frequently been obliged to put on a night force, and is now considering an extension to the plant made necessary by the demand for its various products.

The officers of the company are as follows: P. H. Glatfelter, president; W. L. Glatfelter, secretary and treasurer, and G. W. Major, vice-president and general manager.

Ball Engines.

A record of years of success in its use by electric-light and electric-railway stations in this country makes it pertinent to introduce to our readers the "Ball" engine, built by the Ball Engine Co., of Erie, Pa. Some new features well merit attention.

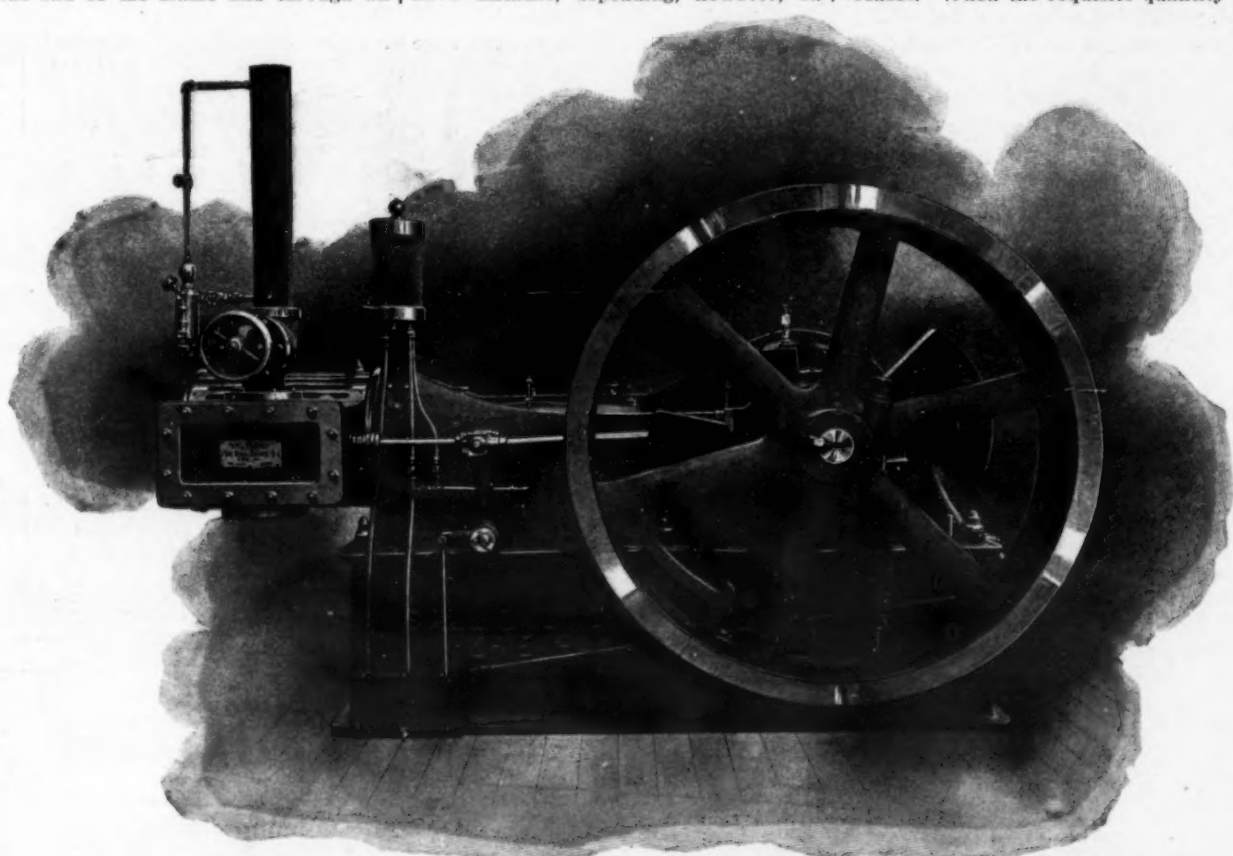
The single-cylinder engine, as illustrated, is equipped with the new Rites governor and automatic lubricating system. The governor, which was described on page 54 of our August 20, 1897, issue, is a combination of inertia and centrifugal forces, and regulates satisfactorily with an extraordinarily rapid adjustment, and without instability or racing. It also has the advantage of simplicity, as the entire governor consists of but a single moving piece suspended upon one pivotal point, thereby reducing friction to a minimum.

The lubrication of the engine is accomplished by the gravity system of supply to graduated sight-feeders located at the various oiling points upon the en-

air to leave the oil; consequently, each of the feeds show clear oil.

The oil, after having been distributed over the running surfaces, gravitates down to the bottom of the inside of the frame, and from there is led out to the front end of the frame and through an

illustrated. The simple and effective operation of this machine, and its great durability withal, render it a most useful and valuable apparatus, developed in the department of hydraulics, for elevating water and conveying it to almost any desired distance, depending, however, on



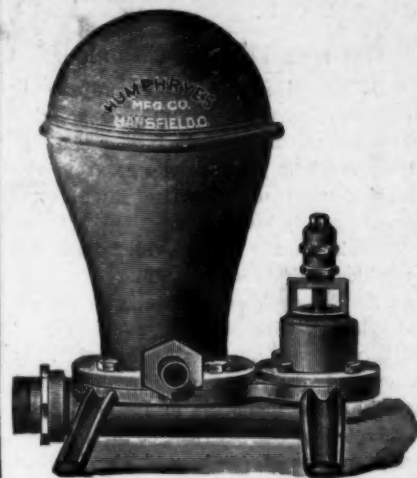
BALL SINGLE-CYLINDER ENGINE.

inclined pipe down to a receiving tank setting near the floor level. Here the oil passes through one or two screens to remove any floating particles of foreign matter, and is then pumped to the supply tank above the engine in a much greater quantity than is called for to supply the engine, the surplus being car-

ried back to the receiving tank by an overflow pipe. This arrangement insures an absolute flood of oil if desirable over the engine, as well as a supply of oil for the engine for a long run without the use of the pump. The relative height of the spring or source

water is forthcoming from the ram, operating under a certain fall, it is not judicious to give it more, for by so doing the strain on the machine is measurably augmented, those parts doing the labor are overtaxed, and the durability of the apparatus impaired and lessened.

For ordinary purposes it is sufficient to



IMPROVED HYDRAULIC RAM.

successfully employed for driving water a distance of 100 to 200 rods, to an altitude of 100 to 200 feet above the ram, and severer trials than these even testify to the indispensability of this almost automatic device. A fall of ten feet from the brook or spring to the ram is abundantly sufficient to raise water to any point less than 150 feet above the location of the machine, while the same amount of fall would also raise water to a point considerably higher, though the supply of water will be proportionately diminished as the height and distance increases. When the requisite quantity of

say that in conveying water, say fifty or sixty rods, it may be safely calculated that one-seventh of the water can be raised and discharged at an elevation five times as high as the fall, or one-fourteenth part can be raised and discharged, say ten times as high as the fall applied, and so in like proportion as the fall or height is varied.

These machines are made of iron and bronze. The valve stem and case are made of the latter material, which has very durable qualities. Prices of these machines upon application to the maker, the Humphries Manufacturing Co., of Mansfield, Ohio.

Nine-Inch Four-Sided Moulder.

This machine has patent adjustable headstock, with horizontal and angular adjustments, by which it can be set either straight or at an angle from the front of the machine. Also patent compensating chip-breaker.

The side heads are provided with adjustable chip-breakers. The machine has the strength and capacity of an inside molder, with all the conveniences of adjustment of an outside machine. It is one of the heaviest, strongest and most durable machines of its class, and is adapted to the heaviest as well as the finest grades of work, and the highest degree of smoothness can be attained.

The frame being heavy and cast in one piece, twisting is prevented, and consequently all bearings must keep in line, while the heavy, solid column at the rear end of the machine affords a suitable and substantial support for the cable, underhead, etc.

The heavy outside bearing for the top arbor extends to the floor and is braced by a solid connection to the base of the frame, with the top secured by a heavy bolt passing through the table and frame, forming an additional support.

The feed works are strong. There are four feed rolls five inches diameter, two upper and two lower, all driven by the most powerful expansion gearing, and feed as strongly when the bed is dropped the

four rates of feed. One binder lever starts or stops the feed.

An adjustable tightener is provided for the belt that drives the top head, by which the slack is instantly taken up from the front or working side of the machine. In running narrow molding or other light work, the strain can be taken off the belt.

The patent compensating spring is placed under the weight bar to relieve the chip-breaker from jar. This is a new and important feature, as it prevents friction, and in planing roughly sawed or uneven lumber, holds the chip-breaker firmly upon the material and causes it to ride smoothly over the rough projections, thus avoiding wavy or imperfect work, and the pressure of the chip-breaker is always the same.

The arbors are of steel, and unusually heavy, with extraordinarily long boxes, and all belts pull on the bottom of the boxes.

The sideheads raise and lower with the table. Both the inside and outside spindles are adjustable while in operation by a crank from the front side. Both spindles can be set at an angle, and either of them raised or lowered or moved in and out independently of the other without changing the angle, and after these heads are set and a molding run, if it is found to vary slightly with the original pattern or drawing, the crank can be placed on the lower crankshaft and turned to tip the head in either direction to the slightest degree required.

The top head has a lateral adjustment, and the bottom head a lateral and vertical adjustment, both controlled by hand-wheels placed convenient to the operator.

The underhead has an outside bearing beyond the pulley, or three bearings in all.

The inside head is perfectly free from all incumbrances, and as easy of access as any other head on the machine.

There is ample space about all the heads to admit of using bits for any kind of work.

A convenient device is provided for raising and lowering the table, and the table

sired to have pressure close to the top cutterhead, the pressure shoe in the rear of top cutterhead can be removed and the double spring rest put in place of it, when two springs can be placed in it and run very close to the cutting circle. The spring posts are held in position with the new improved clamp bolt, with swivel wrench attached.

Purchasers should carefully examine the foregoing features when selecting a molder, as the want of space about the heads and the inconvenience of having to pass around the machine to make the various adjustments form very serious objections that are not easily overcome. Also 7, 8, 9, 10 and 12-inch new column molders are built by the maker of this machine, the Rowley & Hermance Co., of Williamsport, Pa.

Hubs and Hangers.

The Shirk Co., of 14 Custom-house Place, Chicago, Ill., is introducing a new hanger and hubs for bicycles, which possess many distinctive and meritorious features.

The "Shirk" hub bearings are inverted. Cones are practically part of axle and face outward. Cups are screwed in hub and face inward. Cones are ground and

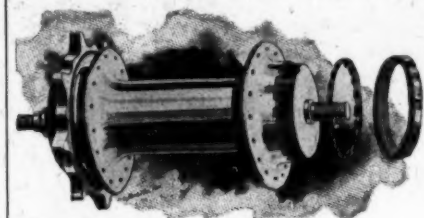


FIG. 1.

polished after being pressed on the axle and are absolutely true. A very important advantage which will be found in the hub is that cones are reversible, or so constructed that each hub has two reserve cones; when one in use becomes worn, by simply reversing cone on axle a perfect one is available. Again, cups being reversed and screwed into shell, gives the widest distance between bearings, which is another advantage over

loosens, or to left tightens the bearings. Removing wheel from frame does not disturb adjustment, and it can be made before or after wheel is placed in frame. Oil is diverted directly from oiler, and every drop runs directly into bearings, and cannot run out when wheel lies on side. The Shirk Co. is on record for wan-

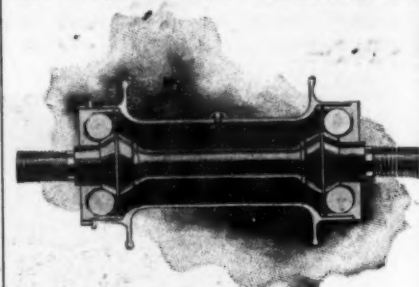


FIG. 2.

dering from the "beaten track" in that all balls, cups, cones, axle nuts, ball retainers, lock nuts and washers for front and rear hubs are the same or interchangeable.

In the crank hanger the cranks and crank axle are in two pieces, divided in the centre of the axle; each constitutes one piece with its crank. The divided axle fits together in the centre of the

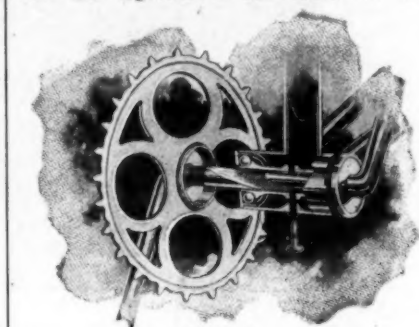


FIG. 3.

crank hanger, and is held together by a sleeve of tool steel screwed on with a right and left thread. The union of the two cranks is mechanically perfect, and when united they are, so far as strength is concerned, practically one piece; yet both cranks and sprockets can be instantly removed from the machine without disconnecting the chain or dis-



NEW COLUMN NINE-INCH FOUR-SIDED MOULDER.

full depth as when working thin lumber.

The top feed rolls raise parallel with the bed, and bear their full weight evenly on all parts of the work, whether narrow or wide, thus insuring a strong, positive and steady feed at all times. They are heavily weighted, and can be instantly raised by a lever to admit the use of a form for setting up the machine on different kinds of work. It has

is so securely clamped to the frame by three heavy bolts that it is as solid as the frame itself.

It is provided with adjustable chip-breakers on both sides of the bottom head. It also has adjustable chip-breakers for the side and top heads.

Another improvement is the double spring rest, shown on the floor at the base of the countershaft. When it is de-

pressed cups. Adjusting cups have left-hand thread, so turn to right to loosen lock nut and bearings. Stationary cups have right-hand thread. The adjustment of the bearings is accomplished without the use of tools, the lock washer being drawn out and inserted in position with the fingers. Turning the lock ring to the right sufficiently permits lock washer to be manipulated. Turning washer to right

turbing the adjustment of the bearings.

Sprockets are detachable for change of gear. Sprockets screw against shoulder on crank flange, and are held in place by lock nut of opposite thread; anyone can make the change; it is simple and convenient, and annoyance of sprockets coming loose or nuts, bolts and screws being lost is obviated. Cones are a part of the sleeve.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., October 28.

In the local phosphate market trade is quiet, in sympathy with the tone in other fertilizer ingredients. Manufacturers, under the present conditions of the market, are not purchasing to any great extent, and both the local and out-of-town trade is dull. From mining sections reports are unchanged, and the market generally is without any special feature. In South Carolina the work of development in the phosphate belt is somewhat restricted, and among river miners business is quiet, with a limited output. Shipments from the Florida ports continue and will be about a good average for the month of October. In the Tennessee phosphate belt the work of development is being pushed more vigorously, and, while the shipments from Mount Pleasant amounted in September to nearly 10,000 tons, the probability is that for the present month from 12,000 to 15,000 tons will be shipped. Several companies are reaching out for a foreign export business, and the Tennessee Phosphate Co. is now making heavy shipments from Pensacola. Holders are generally firm in their views as to prices and are asking outside figures. The following charters were reported in New York last week: British steamer County Down, 1427 tons, from Pensacola to Antwerp with phosphate rock at 19/6, November; British steamer Coquel, 1463 tons, from Fernandina, Fla., to Landskrona with phosphate rock at 19/6, October, and schooner R. C. McQuillian, 440 tons, from Philadelphia to Charleston, S. C., with fertilizer at \$1.50.

Fertilizer Ingredients.

The market for ammoniates is very quiet, with values barely steady. The low price of cotton in the South has a depressing effect upon the trade in that section, and the demand continues very light from all Southern sources. In the East buyers are not purchasing in any quantity, the season having not yet commenced. Buyers in the West are holding stocks very firm, and for blood sales are reported at outside figures. Nitrate of soda is easy and business only moderate.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	\$2 20 @	—
Nitrate of soda	1 75 @	—
Blood	2 20 @	—
Hoof meal	1 90 @	—
Azotine (beef)	1 90 @	—
Azotine (pork)	1 90 @	—
Tankage (concentrated)	1 90 @	—
Tankage (9 and 20)	1 70 @	and 10
Tankage (7 and 30)	16 00 @	17 00
Fish (dry)	19 00 @	—
Fish (acid)	12 00 @	—

Phosphate and Fertilizer Notes.

The steamship Wernetta Hall, of the Johnson Line, cleared from Port Royal, S. C., last week for Liverpool with 1000 tons of phosphate rock and other cargo.

The work on the new buildings of the Addison & Addison Fertilizing Works at Richmond is being rapidly pushed forward to completion, and it will not be long before the plant will be in successful operation.

Mr. C. C. Pinkney, Jr., of Charleston, S. C., manager and holder of the controlling interest in the Farmers' Mining Co., the Wappo Mills, the Horseshoe Mills and the Magnolia Mining Co., suspended payment on the 16th inst.

The British steamship Wastwater, from Savannah for Bremen, put into Halifax, N. S., last week with her cargo on fire. The Wastwater sailed from Savannah on the 15th inst. with 1107 tons of phosphate rock and other cargo. The

British steamship Highlands cleared from Savannah last week for Hamburg with 2000 tons of phosphate rock and other cargo.

The Hon. R. T. Nesbitt, commissioner of agriculture for the State of Georgia, in his annual report gives the manufacture of fertilizers in that State for the year 1894-95 at 226,532.20 tons; for 1895-96 they amounted to 335,617.80 tons, and for 1896-97 to 402,110.10 tons.

The stockholders of the Southern Chemical Co. met at Winston, N. C., on the 21st inst. and elected the following board of directors: P. H. Hanes, H. E. Fries, C. T. Ogburn, H. B. Battle, W. T. Brown, of Winston, and T. H. Battle, of Rocky Mount. The directors chose the following officers: President, Dr. H. B. Battle; vice-president, R. J. Reynolds; secretary and treasurer, W. T. Brown. The site for a fertilizer factory has not been definitely determined upon.

The phosphate business at Mount Pleasant, Tenn., during September was very active, and during the present month the volume of business has shown greater expansion. Shipments of phosphate rock for September reached 9426 tons, of which 7346 tons were domestic and 2080 tons foreign. The stock on hand on October 1 was about 16,000 tons. The bulk of shipments during September were made by the Tennessee Phosphate Co., which is now making large foreign shipments from Pensacola, Fla. The business for the present month in shipments will, it is said, reach 12,000 to 15,000 tons of rock.

State Phosphate Inspector Jones, of South Carolina, gives the following figures in reference to operations in phosphate rock in that State: On the 1st of January last the stock on hand amounted to 17,857 tons, mined by the following companies: Coosaw, 2975 tons; James Reid, 800 tons; Farmers' Mining Co., 10,234 tons; Beaufort Mining Co., 3848 tons. The amount of rock mined from January 1, 1897, to September 30 was as follows: Coosaw, 16,150 tons; James Reid, 3589 tons; Farmers' Mining Co., 18,687 tons; Beaufort Mining Co., 17,863 tons; Empire Mining Co., 1791 tons, making a total of 58,080 tons. The shipments for the same period were 73,859 tons, by the following companies: Coosaw, 32,680 tons; James Reid, 3700 tons; Farmers' Mining Co., 25,492 tons; Beaufort Mining Co., 11,987 tons. The amount of royalty due the State on September 30 was \$29,860.50.

Iron Markets.

Cincinnati, Ohio, October 23.

The Western Foundrymen's Association honored Cincinnati by holding its meeting here during the first three days of the week, and the selling talent of the local pig-iron houses was largely devoted to the entertainment of the association. This will, perhaps, account for the fact that a smaller number of orders for pig iron than usual was secured in this district. The occasion was such a pleasant and instructive one that Cincinnatians are now very anxious to secure the meeting of the American Foundrymen's Association next spring, and are working toward that end.

Furnace prices continue firm, but it is stated that a limited number of warrants have been offered by speculators at somewhat under the market. So far as can be learned, these offerings have not been absorbed, because consumers prefer to buy iron direct from furnaces for scattered delivery. The total amount of iron in warrant yards that is likely to be offered at any time is not sufficient to influence prices on an active market.

Foundrymen are now being troubled to

a considerable degree on account of car famine in the South, and the stoppage of several important coke companies who are influenced by the drought.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry	—	\$10 00
Southern coke No. 2 foundry	—	9 75
Southern coke No. 3 foundry	—	9 45
Southern coke, gray forge	—	9 25
Southern coke, mottled	—	9 00
Southern coke No. 1 soft	—	10 00
Southern coke No. 2 soft	—	9 75
Belfont coke No. 1, Lake Sup.	11 00 @	11 50
Belfont coke No. 2, Lake Sup.	10 50 @	10 75
Hanging Rock charcoal No. 1	14 50 @	15 50
Tennessee charcoal No. 1	12 50 @	13 00
Jackson Co. silvery No. 1	12 50 @	13 00
Standard Georgia car-wheel	14 25 @	15 00

Philadelphia, Pa., October 23.

There has been a fair run of orders this week for forge and foundry grades coke and anthracite iron; also for charcoal iron for delivery during the balance of this year. Considerable business for next year's delivery at present prices has been declined, and in some instances furnaces have simply refused to quote on large business that would take the major portion of their product for the first quarter of '98.

The Pennsylvania Railroad reports all of its car equipment in use, with a shortage of 2000 freight cars, which are badly needed to carry the business now offered.

We quote for cash f. o. b. Philadelphia:

No. 1 X standard Alabama	—	\$11 50
No. 2 X standard Alabama	—	11 00
No. 1 X lake ore coke iron	—	12 50
No. 2 X lake ore coke iron	—	12 50
Niagara coke, malleable	—	12 50
Standard Georgia C. C.	—	15 75

New York, N. Y., October 23.

The business of the past week has not been marked with any particular incident. There has been a fair run of orders, but none of any magnitude. The furnaces are very busy in getting forward deliveries on old contracts, and consumers are in the main waiting till the turn of the year to enter upon new ones. The condition of general business throughout the country is in a large measure very satisfactory, and the outlook promising. While the market is quiet, there is a strong undercurrent of confidence that the gradual growth of business is in every way healthy, and the belief obtains everywhere that 1898 is to be a year of great prosperity. The furnace men express themselves as entirely satisfied with the comparative quiet of the market, feeling sure that things are righting themselves. There is no indication of a decline in prices. Some holders of speculative lots, being willing to realize a small profit on their holdings, have placed their warrants on the market, which has slightly disturbed the views of the trade as to prices. The market closes in good form.

We quote for cash f. o. b. New York:

No. 1 X standard Alabama	\$11 00 @	\$11 25
No. 2 X standard Alabama	10 50 @	10 75
No. 1 X lake ore coke iron	12 50 @	12 75
No. 2 X lake ore coke iron	12 00 @	12 25
Niagara coke malleable	12 00 @	12 25
Standard Georgia charcoal	—	15 50

ROGERS, BROWN & CO.

TRADE NOTES.

Synchronous Motor.—The Muscogee Manufacturing Co., of Columbus, Ga., has bought a 250-horse-power synchronous motor from the Stanley Manufacturing Co., of Pittsfield, Mass.

Tinsmith's Opportunity.—It is said that there is a good opportunity in Elizabeth City, N. C., for the location of a thorough and first-class tinsmith. Information can be obtained by addressing J. B. Flora.

Machine-tool Works.—Messrs. Dietz, Schumacher & Boye, Cincinnati, O., have let contract for the erection of an addition to their machine-tool works. This move was made necessary by the rapidly extending business of the company. The firm made a shipment last week to Germany of several large electric motor lathes, which were expressly produced for that trade.

Agricultural Implements, etc.—Messrs. Hensch & Dromgold, of York, Pa., state that their fall trade has been from 60 to 70 per

cent. larger than for the last two or three years. The outlook for the trade next year is better than it has been, and the firm believes spring trade will be very large, especially on wheel spring-tooth harrows, riding and walking two-horse cultivators, one-horse cultivators, corn planters, etc.

Representation in England.—Mr. John Needham, of John Needham & Sons, Manchester, England, is visiting the larger cities of the United States making arrangements to represent American firms in England. This firm has handled American machine tools, woodworking machinery, iron and steel-working machinery, etc., with success in the past, and prospective investigators of the foreign field who are interested can address Mr. Needham at the Windsor Hotel, New York city, where he will locate for a short time after November 10.

Sheet-metal Goods.—The factory of the Buffalo Corrugating Co., Buffalo, N. Y., is being equipped with new and modern machinery for the production of a complete line of sheet-metal goods. The facilities will be such that the company will be in a position to make quick shipments and prompt deliveries to the trade. Especial preparation has been made to make any kind of special work upon receipt of plans and specifications at very reasonable prices, and, owing to many years experience in this business, assurance is given that the goods will be strictly first class; quality and workmanship guaranteed in every particular.

Manufacturing Plants, etc.—Mr. Ashley B. Tower, the prominent mill architect and hydraulic engineer, has associated himself with Mr. Joseph H. Wallace, under the firm name of Tower & Wallace, with offices at Broadway and Twenty-fifth street, New York, and at Holyoke, Mass., where Mr. Tower has carried on the business for the past twenty-six years. Messrs. Tower & Wallace propose to devote their entire attention to the design of manufacturing plants and power development and transmission, and will make a specialty of furnishing surveys, plans, specifications and estimates for the construction and equipment of cotton, woolen and paper mills.

Electric Companies Consolidate.—An important happening in electrical circles just announced was the consolidation of two of the most prominent electrical companies in this country. The firms are the Sprague Electric Elevator Co. and the Interior Conduit & Insulation Co. of New York. The Sprague Electric Co. is the title of the new corporation (capital stock \$5,000,000), and, besides producing the specialties of the two companies, some new and interesting inventions are contemplated. Mr. A. B. Chandler is president, and managing director; E. H. Johnson, vice-president and general manager; E. C. Platt, secretary-treasurer. Offices will be located in the Postal Telegraph Building, at 253 Broadway, New York city.

TRADE LITERATURE.

Pumps.—"Squirts by A. Red Pump," issued by the Red Jacket Manufacturing Co., of Davenport, Iowa, tells of the many excellent qualities of the pump manufactured by the company.

"Mines and Minerals."—The Colliery Engineer and Metal Miner, of Scranton, Pa., has changed its name to "Mines and Metals." The reasons for so radical a change in the title of this excellent publication are given in a circular now ready.

"Platinum."—Such is the title of a booklet relating to this metal, the contents touching on sources of supply, identification and separation of the ore; facts of interest to prospectors and miners, etc. Messrs. Baker & Co., platinum refiners, of Newark, N. J., publish the booklet.

Lubricators.—The National Lubricator Co., of 107 Montgomery street, Albany, N. Y., has issued a leaflet devoted to an exposition of the lubricator manufactured by it. This device is automatic, with sight-feed attachments, and the maker claims that by its use oil lasts longer, fuel lasts longer and engine lasts longer.

Grinding Machines.—As successors to Landis Bros., who manufactured grinding machines for the last seven years, and who are well known to the trade, the Landis Tool Co., of Waynesboro, Pa., issues its catalogue. The company presents the merits of its grinding machines, which are made universal and plain, for cylindrical, conical and plane-face surfaces, and an investigation of these tools is invited.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

ALABAMA.

Anniston—Pipe and Foundry Plant.—The Anniston Pipe & Foundry Co. will rebuild its plant, which was recently burned. A large and costly works will be erected. Local representative J. K. Dimmick can be addressed.

Anniston—Foundry and Pipe Works.—The directors of the Anniston Pipe & Foundry Co. have definitely decided to rebuild at Anniston their large plant which was burned recently. The plant formerly operated was valued at several hundred thousand dollars, and the new one will be as large and probably larger. A complete equipment of new machinery will be purchased, new buildings erected, etc. The company will employ 600 men, and expects to enter the market by January with all sizes of pipe from three inches to forty-eight inches. Louis Mueller, secretary, can be addressed.*

Bridgeport—Woodworking Factory.—The Harwood Manufacturing Co., James J. Walker, manager, has fully organized and let contracts for its buildings; machinery has also been ordered for making wagon rims, etc.

Bridgeport—Saw Mills, etc.—J. H. Anderson, of Bridgeport, has closed a contract with Frederick Aldous, of New York, for the purchase of a saw mill near Bridgeport. Operations will be resumed in the mill after alterations are completed.

Cullman—Harness Factory.—W. A. Mitchell is putting in machinery for harness manufacturing.

Florence—Cotton Mill.—The Cherry Cotton Mills expects to add cards and equipments very soon to the amount of \$8000 or \$10,000; now has 12,000 spindles.

Huntsville—Fibre Factory.—Willard Canady, of Redlands, Cal., contemplates the erection of an excelsior and fibre factory in Huntsville, and will probably decide definitely this week. Address Mr. Canady, at the Stegall Hotel, Huntsville, Ala.

Huntsville—Water Works, Sewerage, etc.—The city council has authorized the preparation of plans and specifications for new building and additional machinery for the pumping station; also, \$10,000 bonds will be

issued to provide funds for improving sewer system; road-improving machinery will also be obtained. Address the mayor for information.*

ARKANSAS.

Hot Springs—Bridge.—The county authorities have authorized an appropriation of \$11,000 for the construction of a bridge. Address the county clerk. (This item reported by error under Mississippi last week.)

FLORIDA.

Jacksonville—Electric-light Plant.—The city will at once advertise for bids on the erection of the addition to its electric-light plant, recently noted. An appropriation of \$30,000 has been made for the work. Address the mayor.*

Tampa—Cigar Factory.—Jose Morales & Co. have been incorporated, with a capital stock of \$150,000, to manufacture cigars, etc.

Tampa—Ice Factory.—Samuel Borchardt (Room 6, Knight Building,) contemplates the erection of a small ice factory.*

GEORGIA.

Acworth—Cotton Mill.—A movement is on foot for the organization of a company to build a cotton mill to cost \$100,000. J. L. Lemon, R. B. Walker, T. F. Terry, D. A. Smith, H. P. McLain and others are interested. For information address H. P. McLain.

Augusta—Cotton Mill.—The Globe Cotton Mills, now operating 2000 spindles and ninety-six looms, contemplates increasing its equipment about capacity.

Atlanta—Excelsior Factory.—Charles Cohen's excelsior factory was only damaged by the recent fire, and is now in operation.

Atlanta—Land Company.—The Continental Land Co. has been incorporated, with capital stock of \$50,000, to deal in land, etc.; W. A. Hemphill and others, incorporators.

Augusta—Cotton Factory.—Jacob Philizy, Peter G. Burum, Harold Lab and others have incorporated the F. B. Tobin Cotton Co., to deal in cotton, etc.; capital \$20,000. Address Preston Brooks Tobin.

Douglasville—Electric-light and Water Works.—Preparations are being made for the construction of water works and the erection of an electric-light plant. Frank Lederle, of Atlanta, has been engaged as engineer, and plans and specifications are now ready; latter can be seen at office of Col. J. S. James, Atlanta, Ga. For further particulars apply to either of the above or to Samuel Hale, president, Douglasville.*

Ellijay—Gold Mines.—Col. R. S. Carr and Frederick Carr, of Charleston, W. Va., and Col. John Q. Dickinson, also of Charleston, W. Va., have obtained an interest in a gold mine near Ellijay, Ga., and will doubtless institute developments.

Fitzgerald—Mercantile.—Madison Bruce and others have incorporated the Irwin County Dry Goods Co., with a capital stock of \$25,000.

Fitzgerald—Lumber Mills.—R. M. Pearson, D. M. Pearson and J. Evans have incorporated the Fitzgerald Lumber Co., capital stock \$40,000, to manufacture lumber, etc.

White Hall—Cotton Mill.—The Georgia Manufacturing Co. will put in in the next six weeks 3228 spindles; now has 8320 spindles in place.

KENTUCKY.

Ashland—Stave Factory.—J. H. Hutchinson, formerly of Tennessee, will erect a stave factory to employ 100 men and produce daily 8000 staves.

Louisville—Book Company.—Charles P. Pitchford and others have incorporated the Columbian Book Co., with authorized capital stock of \$25,000.

Louisville—Woodworking Factory.—Bell & Coggeshall will expend \$30,000 in erecting addition and adding machinery to their box factory and planing mill.

Owensboro—Bicycle Factory.—The Delker Cycle Manufacturing Co. talks of increasing its capital stock to enlarge operations.

Paducah—Mineral Lands, etc.—Polk Brooks has leased mineral lands to the Delwood Mining Co. of Illinois.

Parksville—Flour Mill.—L. C. Ewing contemplates putting in new machinery at his flour mill.

LOUISIANA.

Franklin—Saw Mill.—The Kyle Lumber Co., Limited, intends to erect a new mill, to replace one that was burned recently. A plant of about 30,000 feet daily capacity is proposed; Charles N. Frost, secretary, can be addressed.*

New Orleans—Excelsior Factory.—The Carrollton Steam Wood Yard & Excelsior Manufacturing Co., reported last week as incorporated, has let contracts for erection of buildings for its factory; capacity to be eight tons daily; boiler-house 20x28 feet, factory proper 60x50 feet; employ twelve men.

MARYLAND.

Baltimore—Steamboat Company.—The Port Deposit & Havre de Grace Steamboat Co. has been incorporated, with capital stock of \$55,000, by Washington W. Hopkins, of Port Deposit; James Hooper, of Havre de Grace, Md.; Hope H. Barroll, of Chestertown, Md., and others, to operate a steamboat line between Port Deposit and Baltimore, etc.; office address of company 224 St. Paul street.

Baltimore—Pianos, etc.—The G. Fred Kranz Co. has been incorporated by Geo. F. Kranz, Peter Schmidt, Thomas R. D. Myers, Adolph Prevost and Charles J. Weber, to buy and sell pianos and other musical instruments; capital stock is \$15,000.

Baltimore—Commission Company.—Chartered: The Ames & Fentress Co., for the purpose of carrying on a general commission business. The capital stock is placed at \$10,000, and the incorporators are Geo. Thomas Ames, Walter G. Fentress, John A. Little, Harry W. Kurtz and John H. Seward.

Hagerstown—Mattress Factory.—The Hagerstown Woven Wire Mattress Co. will rebuild at once its factory which was burned last week. Address 248 Prospect street.

Washington, D. C.—Electrical and Manufacturing.—Chartered: The Washington Electrical & Manufacturing Co., to engage in the general manufacture of and contracting for electrical appliances. The capital stock of the company is \$10,000. Address H. P. Hill, president, Washington Electrical & Manufacturing Co.

MISSISSIPPI.

Charleston—Water Supply.—The city is to drill wells for water supply. Address C. W. Manley, mayor.*

West Point—Cotton Gin.—L. Love Crump will rebuild his burned cotton gin, to be completed for use on next crop.*

MISSOURI.

Deepwater—Brick Works.—The W. S. Dickey Clay Manufacturing Co. is rebuilding its plant at Deepwater; new works will include 600-horse-power boilers, 500-horse-power engine, dry and wet clay mills, etc. Address the company at 715 Walnut street, Kansas City, Mo.*

Joplin—Mining.—Thomas Morgan, James Campbell, A. Baker and others have incorporated the Bingo Mining Co., with a capital stock of \$30,000. Address Thomas Morgan, of the Bingo Mining Co.

Parkville—Water Works.—The proposed water works may materialize soon. H. B. McAfee can be addressed.

Slater—Water Works.—Plans will soon be made for the proposed extensions to the city water works. R. L. Harvey, mayor, can be addressed.

St. Louis—Steam Laundry.—Incorporated: The New American Laundry Co., capital stock of \$15,000, by C. C. Hulsart, J. T. Pruitt, Laura A. Herneau and R. E. Morgan.

St. Louis—Manufacturing.—Incorporated: The Lithosite Manufacturing Co., with a capital stock of \$500,000, by W. K. Bixby, W. F. Nolker, W. McMillan, P. B. Fenske and F. Widmann. Address W. K. Bixby, the Lithosite Manufacturing Co.

St. Louis—Lumber Company.—Incorporated: The George M. Griffin Lumber Co., with a capital stock of \$5000, all paid, by George M. Griffin, B. S. Griffin and D. D. Fassett. Address George M. Griffin.

St. Louis—Heating and Ventilating Company.—Incorporated: The Cullen & Stock Heating & Ventilating Co., capital stock \$10,000, by James J. Cullen, C. A. Stock and Philip Stock. Address James J. Cullen, of

the Cullen & Stock Heating & Ventilating Co.

St. Louis—Telegraph Company.—Chartered: The Interstate Telegraph Co., capital stock \$20,000, by H. L. English, D. J. Sullivan, J. Rueckert and others. Address H. L. English, of the Interstate Telegraph Co.

NORTH CAROLINA.

Albemarle—Cotton Mill.—The Eard Manufacturing Co. expects to double the capacity of its mill in the spring; now has 5000 spindles in position.

Davidson—Cotton Mill.—The Linden Manufacturing Co. is considering putting in four new spinning frames and a corresponding amount of roving machinery.

Durham—Cotton Mill.—We are informed that the report is rather premature which states that J. S. Carr and associates intend erecting a cotton mill. The enterprise is, however, under consideration.

Gibsonville—Cotton Mill.—The Minneola Manufacturing Co. will add some looms to its mill; has 2000 spindles and 168 looms in operation now.

Graham—Cotton Mill.—The Onelda Cotton Mills will add 4000 spindles to its plant and have same in operation by December 1; now has 4424 spindles and 463 looms in operation.

Granite Falls—Cotton Mill.—The Granite Falls Manufacturing Co. is putting in lap-room machinery and an engine.

Rockingham—Cotton Mill.—Steele's Mills contemplate increasing their machinery equipment about 50 per cent.; now has 11,200 spindles and 300 looms running.

Salisbury—Cotton Mill.—The Kesler Manufacturing Co., now operating 5000 spindles, intends, sometime in '98, to install either 5000 additional spindles or put in 150 looms.

Siler City—Cotton Mill.—The Hadley People's Manufacturing Co. is arranging to increase its equipment; now has 2000 spindles in position.

Stubbs—Cotton Mill.—The Buffalo Manufacturing Co. contemplates doubling its capacity next year; now has 2016 spindles running.

Sweet Home—Flour Mill.—J. B. King contemplates changing his mill to the roller system.

Worthville—Cotton Mill.—The Worth Manufacturing Co. intends to add 500 looms to its mill; now has 12,000 spindles and 412 looms.*

SOUTH CAROLINA.

Greenwood—Electric-light and Water Works.—The city election to decide as to issuing \$40,000 in bonds for water works and electric-light plant resulted favorably. A committee, composed of A. St. C. Lee, R. M. Hayes and Joseph F. Davis, has charge of the work as the commissioners of public works, and will arrange at once for the carrying out of the proposition. Address the commissioners.*

Rock Hill—Cotton Mill.—The Rock Hill Cotton Factory Co. expects within the next year to put in 2000 spindles and fifty looms additional.

Simpsonville—Telephone System.—Chartered: The Simpsonville Telephone Co., which proposes to construct and operate a telephone line from Simpsonville, a distance of twenty miles, to Greenville. The incorporators are William P. Gresham and W. D. Fowler. Address William P. Gresham, Simpsonville Telephone Co.

Warrenville—Kaolin Mines, etc.—The Mutual Mining & Manufacturing Co., reported during the week as organized, etc., proposes the full development of its kaolin lands near Alken Junction. For information address Charles W. Davis, manager, Mutual Mining & Manufacturing Co., Augusta, Ga.*

TENNESSEE.

Dickson—Handle Factory.—J. B. Leathers' Sons, of Mount Pleasant, Pa., contemplate erecting a handle factory in Dickson, and will decide definitely next week. Address the firm at Mount Eagle.

South Pittsburg—Flour Mill.—Bise & Martin intend to build a custom flour mill.*

TEXAS.

Beaumont—Irrigation System.—The Green & Stringe Irrigation Co., reported recently as incorporated, intends to construct

a canal about fifteen miles long, 100 feet wide, for the irrigation of 50,000 acres of rice lands, etc. Address W. W. Green, president, for further information.*

Commerce—Water Works.—The report on the proposed water works estimates the cost at about \$18,000. Steps will be taken to ask the city council to call an election on bonds. Address the mayor.

Corsicana—Oil Wells, etc.—The Southern Oil Co., capital stock \$300,000, has been chartered for prospecting and developing oil and mineral lands of all kinds; manufacturing, refining, storing, buying and selling petroleum and other oils and products of same, etc.; incorporators: Ralph Beaton, H. G. Damon, A. Ferguson, H. W. White, Fred Fleming, Allison Templeton and S. W. Johnson. Address Ralph Beaton, of the Southern Oil Co.

Fort Worth—Clothing Company.—Incorporated: The Gordon Clothing Co., capital stock \$10,000, by M. Laskin, Sam Rosen and L. M. Miller.

Georgetown—Shoe Company.—Chartered: The Georgetown Shoe Co., capital stock \$10,000, to do a general retail merchandise business; incorporators: B. T. Smith, P. M. Dimmitt and F. W. Carothers. Address B. T. Smith.

Myrtle Springs—Hat Factory.—M. M. Norman intends to establish a hat factory.*

Pecos—Irrigation System.—Chartered: The Union Irrigation Co., to promote irrigation by owning, constructing, acquiring, maintaining and operating dams, reservoirs, lakes, etc.; capital stock \$10,000; incorporators: J. C. Avery, J. J. Walker and A. M. Walthall. Address J. C. Avery, of the Union Irrigation Co.

Rockdale—Cotton Ginnery.—Coffield & Williams intend to rebuild their burned cotton ginnery; will have equipment of four stands, 70-saw gins, grist mill, etc.

VIRGINIA.

Portsmouth—Drugs.—The Buff Drug Co. has been incorporated, with capital of \$2000, to deal in drugs, etc. Address Henry A. Buff, treasurer.

Richmond—Beet-sugar Factory, etc.—The Interstate Sugar Co., reported under Charleston, W. Va., several weeks ago as incorporated, intends to promote the cultivation of the sugar beet in the South, and secure the erection of sugar factories in those sections which prove themselves adaptable to the growing of the beet. A number of prominent capitalists are interested, a full list of whom was given in our previous notice. O. K. Lapham, of Staunton, Va., is president of the company, and can be addressed by those desiring information.

WEST VIRGINIA.

Charleston—Beet-sugar Factory, etc.—For note regarding the Interstate Sugar Co., recently reported under this city's heading, see Richmond, Va., in this issue.

Charleston—Gas and Oil Wells.—Chartered: The Elk Oil & Gas Co., with an authorized capital of \$50,000, to operate for oil and gas in the region of Elk river, in Kanawha and Roane counties. The incorporators are Philip Frankenberger, Daniel Mayer, A. H. Malone and G. W. Atkinson, of Charleston, and C. A. Curran, of Louisville, Ky. Proposed formation of this company was noted during the week. Address G. W. Atkinson, Charleston.

Fairview—Gas and Oil Wells.—Chartered: The Raymond Oil & Gas Co., with an authorized capital of \$50,000. The incorporators are W. Hunter, Atha; J. W. P. Jarvis and A. B. Bright, of Amos, W. Va.; R. C. Price, of Hoodsville, W. Va., and G. S. Bassett, of Bassett, W. Va. Address J. W. P. Jarvis, Amos, W. Va.

Piedmont—Telephone Company.—Incorporated: The Gordon Telephone Co., with principal office at Piedmont, and capital stock \$5000, with privilege of increasing to \$100,000. Gerald Martin Fennell, of New York, is the chief stockholder. (This company probably intends conducting its business outside of the South.)

Wellsburg—Telephone System.—The Wellsburg Telephone Co., W. K. Cummings, manager, has let contract for the construction of its telephone system.

West Virginia—Coal Lands.—J. M. Hastings, of Pittsburg, Pa., writes denying the current reports that he is negotiating for 10,000 acres of coal lands in West Virginia.

BURNED.

Bolivar, Tenn.—Buildings of Western Tennessee Asylum; loss \$25,000.

Calhoun, Texas.—Cotton gin of Fisher, Thomas & Smith.

Cavespring, Mo.—Mining plant of Fred B. Norton.

Lamont, Ga.—Cotton gin of T. J. Moyer & Bro.

Maxton, N. C.—Sash and door factory of J. C. McCaskill; loss \$5000.

Memphis, Tenn.—Box factory of Beard, Wilson & Co.; loss \$25,000.

Newberg, Texas.—Grist mill and cotton gin of Obermuller Bros.

Oldtown, Fla.—Saw mill of McQueen & Robinson.

Raleigh, N. C.—The Harp Building, owned by T. B. Yancey.

Raleigh, N. C.—Vehicle repair shops of T. A. Bowen & Son; loss \$9000.

Shreveport, La.—The Maloney Hotel.

Springfield, Mo.—Handle factory of T. E. Jackson; loss \$13,000.

BUILDING NOTES.

Baltimore, Md.—Dwellings.—John Leo Mueller will build five dwellings; John H. Powers, Jr., twenty-one dwellings; Charles A. Foreman, twenty-eight dwellings; G. Hyatt & Sons, nine dwellings.

Charlotte, N. C.—Apartment-house.—The report that S. Wittkowsky contemplates another apartment-house is incorrect.

Cleburne, Texas—Roundhouse.—The Gulf, Colorado & Santa Fe Railway has let contract to E. B. Evans, of Cleburne, for the erection of a 24-stall roundhouse, to cost about \$40,000.

Currituck, N. C.—Courthouse.—The county of Currituck will issue bonds to the amount of \$8000 to secure funds for enlarging and rebuilding the county courthouse. Address William H. Bray, secretary.

Key West, Fla.—Residence.—Frank P. Milburn, of Charlotte, N. C., will prepare plans for residence for W. Hunt Harris, of Key West.

Louisville, Ky.—Residence.—Clark & Loomis have prepared plans for residence for L. P. Ewald, to cost \$15,000.

Louisville, Ky.—Residence.—J. B. Hutchings has prepared plans for an \$18,000 residence for C. C. Mengel, Jr.

Macon, Ga.—Synagogue.—The Hebrews propose the erection of a synagogue to cost about \$50,000. Rabbi Marcusson can be addressed.

Salisbury, N. C.—Sanitarium.—Drs. Whitehead and Long intend to build a sanitarium, to be equipped with force-pump for forcing water, steam-heating apparatus, open fireplaces, numerous bathtubs, tiled floors, ground-glass windows, stationary washstands, toilet-rooms, etc. Plans and specifications will be submitted for bids in a few days.

St. Louis, Mo.—Mercantile Building.—Hule Bros., of Chicago, Ill., will erect a \$20,000 mercantile building in St. Louis.

Washington, D. C.—Dwellings.—George P. Newton will build four dwellings after plans by N. T. Haller, at a cost of \$20,000; same party will also build a three-story dwelling to cost \$10,000. C. L. Harding has plans for a costly residence. Wharton E. Lester will erect a dwelling to cost \$18,000 after plans by Fred W. Carlisle & Co.; builder, John S. Larcombe. N. T. Haller has planned three residences for Leroy C. Morris to cost \$18,000. Thomas W. Kerr will build four dwellings. William J. Marsh has planned a residence for Miss Frances L. White. Nearly all of the above houses will have electric fixtures, heating apparatus, tiled mantles, tiled baths, etc.

RAILROAD CONSTRUCTION.

Railways.

Abbeville, S. C.—Officials of the Seaboard Air Line and parties who are promoting the railroad between Piedmont and Pelzer have recently been in conference relative to the construction of this line. Among those interested are Ellyson A. Smythe, of Pelzer, and James L. Orr, of Piedmont.

Charleston, W. Va.—A company has been organized to construct a railroad from Charleston to a point in Braxton county, West Virginia. Its capital is to be \$25,000, and it is empowered to construct factories for the purpose of making what is known as an itemizer momentum engine. Among the chartered members are R. B. Bayley, of Bristol, Pa.; George A. Coolidge, J. D. Steinmiltz and W. B. Coolidge, of Philadelphia, Pa.

Chattanooga, Tenn.—President J. T. Crass, of the Chattanooga & Lookout Mount-

ain Railroad Co., advises the Manufacturers' Record that this road, which he has recently purchased, will probably be extended to what is known as Lula Lake, a summer resort, in the suburbs. The extension will be along the summit of Lookout mountain, and will be about five miles in length, to be operated by electricity. It will not be built until next year.

Elba, Ala.—The railroad line being constructed between Newton and Elba has been completed for a distance of nearly fourteen miles. About 400 men are now at work upon the road. It is to be a branch of the Plant system, of which B. Dunham, of Savannah, Ga., is general superintendent.

El Paso, Texas.—The El Paso & North-eastern Railroad Co. has been organized for the purpose of promoting the railroad between El Paso and the New Mexico coal fields, already referred to in the Manufacturers' Record. The New Mexico Railway & Coal Co., which has been formed, is to be the construction company. It is reported that construction work is to begin about November 1, and the road is to be completed within fifteen months. C. D. Simpson, 66 Broadway, New York, is president.

Fairfield, Texas.—W. R. Boyd and others are promoting the proposed railroad line from Fairfield to a connection with the International & Great Northern or some other railroad system. The line is to be called the Corsicana & Southeastern Railroad. It will be twenty miles long. W. B. Moses is also interested.

Farmington, Mo.—The De Lassus & Farmington Railroad Co. has been incorporated to build a railroad line between the two towns mentioned, a distance of three miles. The capital is placed at \$40,000.

Haylow, Ga.—G. S. Baxter & Co. advise the Manufacturers' Record that they are now constructing the Atlantic, Valdosta & Western Railroad, which will run through portions of Lowndes, Echols, Clinch and Charlton counties, Georgia, and Baker and Duval counties, Florida. About thirty miles of the line are now in operation.

Hot Springs, Ark.—It is reported that the Hot Springs Terminal Railroad Co. has graded five miles of its road, and that track-laying will begin at an early date. J. P. Mellard is president and E. A. Douglas vice-president of the company.

Little Rock, Ark.—W. B. Worthen advises the Manufacturers' Record that surveys have been made for the extension of the railroad line in which he is interested and that the company will probably be in the market for material at a future date.

Little Rock, Ark.—It is reported that the stockholders of the Springfield, Little Rock & Gulf Railroad Co. have authorized J. A. Hinsey, the president, to issue the necessary bonds to construct 700 miles of railroad. Mr. Hinsey's present address is Little Rock, Ark.

Montgomery, Ala.—About thirty-three miles of track of the Montgomery & Tuscaloosa division of the Mobile & Ohio system have been completed and practically all the grading. It is calculated that the entire line will be ready for train service by April 1, 1898.

Natchez, Miss.—Surveys have begun upon the line of the proposed Natchez & Gulf Railroad, between Natchez and Lumberton, Miss. If built this line will form an extension to Natchez of the Gulf & Ship Island Railroad, now in operation, and will form a line across Mississippi to tidewater. W. H. Hardy is engineer. S. S. Bulls, at Gulfport, Miss., is general manager of the Gulf & Ship Island road.

Norfolk, Va.—It is stated that the Norfolk, Virginia Beach & Southern Railroad Co. has determined to build an extension of about twenty miles to its present line, which is now in operation between Norfolk and Virginia Beach. The extension will reach what is known as North river, and will traverse a number of large truck farms. It is understood that from North river the company will operate a line of steamers into Tidewater Carolina. The line is to be laid with 60-pound steel rails. B. P. Holland is superintendent of the company.

Parkersburg, W. Va.—The Parkersburg & Marietta Traction Co. has been organized to build a railroad line between Parkersburg and Marietta, O. The promoters include H. A. McCosh and E. E. Wilson, of Parkersburg; A. J. Yoke, of Grafton, W. Va., and W. A. Reynolds, of Oil City, Pa. The line is to be operated by electric power, and, if constructed, a bridge over the Ohio river will be necessary. It will be about ten miles long.

Pen-Mar, Md.—The Blue Ridge Electric Railroad & Power Co., which is promoting

a railroad line from Waynesboro, Pa., to the principal resorts in the Blue Ridge mountains, has organized a company in Pennsylvania, which includes Roger W. Barron, president; Winfield S. Cahill, treasurer, both of Baltimore; also Simon P. Schott and William Knabe, of Baltimore, directors. The capital of the company is to be \$50,000.

Reidsville, N. C.—It is reported that the Southern Railway Co. now contemplates building a road between Reidsville and Kernersville, a distance of twenty-five miles. It is understood that, if built, the line will considerably shorten the distance between Atlanta and Washington. Frank S. Gannon, of Washington, is general manager of the company.

Richmond, Va.—It is reported that the Chesapeake & Ohio Railroad Co. has nearly completed arrangements for its extensive terminals in Richmond, which will involve the expenditure of \$2,000,000, and the construction of several miles of track. Decatur Axtell, at Richmond, is vice-president of the company.

Sedalia, Mo.—The Missouri & Iowa Southern Company has been organized, with \$700,000 capital, by O. C. Drew and E. S. Penfield, of Houston, Texas; Thomas C. Pennington, treasurer of the Chicago Street Railway Co.; L. J. Hammer, of Miami; J. E. House, of Omaha, Neb., and James Humphrey, of Sedalia. The company proposes to build a north and south line with the Missouri & Iowa by way of Sedalia, Marshall and Miami.

Sedalia, Mo.—Woodford Brooks and others are interested in the plan to build an electric railroad from Sedalia to McAllister Springs, a distance of about twenty-five miles, where, it is stated, there are extensive coal deposits. Mr. Brooks was formerly connected with the Polytechnic Street Railway Co., of Fort Worth, Texas.

Selma, Ala.—The Atlanta & Alabama Railroad Co. has begun work upon the section of its road proposed to be built between Selma and Atlanta. The Erie Construction Co. is the general contractor for the work, and R. M. Mitchell, of Atlanta, president of the railroad company.

Shreveport, La.—The city council has granted the Shreveport & Red River Valley Railroad Co. the right of way in the city. It is reported that grading has already begun between Shreveport and Coushatta. George W. Fouke, of Texarkana, Texas, and W. C. Taylor, of Shreveport, are interested.

Snow Hill, N. C.—Robert Hancock, president of the Atlantic & North Carolina Railroad Co., advises the Manufacturers' Record that surveys are being made for the proposed branch from La Grange, N. C., to Snow Hill. The business men of Snow Hill and others are encouraging the matter. The distance is seven miles. Mr. Hancock's address is Newberne, N. C.

Statesboro, Ga.—The new owners of the Cuyler & Woodburn Railroad have obtained another charter under the title of the Savannah & Statesboro Railroad Co. It is to have a capital stock of \$30,000, with the privilege of increasing this amount to \$200,000. Among those interested are Stillson Hutchins, of Washington, and T. E. Robertson, of Georgia.

St. Louis, Mo.—The Illinois, Kentucky & Virginia Railroad Co. has been formed to construct a railroad line from a point on the Mississippi river opposite St. Louis to the Tennessee river, by the way of Cairo, Ill. C. J. Griffith, of St. Louis, is president and D. V. Dobbins, of Erie, Pa., engineer.

Sweet Water, Texas.—General Manager Irvin Wheatcroft, of the Colorado Valley Railroad Co., has asked permission of the State to issue bonds to the extent of \$1,264,000 to finance the building of this road for a distance of seventy miles. It is stated that the company intends building in all about 300 miles of road, and has five completed. One locomotive and 1700 tons steel rails have been purchased. The headquarters of the company are at Sweet Water, Texas.

Sweet Water, Texas.—The Colorado Valley Railroad Co. advises the Manufacturers' Record that it has completed contracts for grading and track-laying and desires to purchase rails and equipment. A. M. Cooper, of Sweet Water, Texas, will give further information.*

Westminster, Md.—The promoters of the Washington, Westminster & Gettysburg Railroad have decided to obtain a charter in Pennsylvania in order to complete the railroad in that State. As already stated, this road is to be built between the points mentioned, and is to be operated by steam

power. J. B. Colegrove, of Washington, is one of the principal promoters.

Street Railways.

Chattanooga, Tenn.—A. M. Pennock, who is promoting the scheme of equipping a portion of the Chattanooga, Rome & Southern Railroad for use of electric motors, advises the Manufacturers' Record that the railroad company is now considering the proposition, which is to utilize a portion of its tracks between Chattanooga and Chickamauga Park by placing upon this portion an electric conduit system, which will not interfere with the operation of steam locomotives.

St. Louis, Mo.—It is reported that a syndicate of New Yorkers are obtaining estimates of the cost of an elevated railroad system in St. Louis. They have recently been in the city with this end in view.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler.—Proposals will be opened November 5 for supplying the City Fire Department with one second-size La France patent nest-tube boiler, connecting same and making alterations and repairs to engine No. 10, as per specifications. Address Stanley Baker, secretary, board of fire commissioners, Baltimore, Md., for specifications, etc.

Boiler and Engine.—L. Love Crump, West Point, Miss., will probably need boiler and engine for ginning outfit of thirty bales daily.

Boiler and Engine.—See "Hoisting Engine."

Brick.—The Anniston Pipe & Foundry Co., Anniston, Ala., is in the market for from 175,000 to 200,000 vitrified shale and fire brick. Address Louis Mueller, secretary.

Brick Machinery.—The W. S. Dickey Clay Manufacturing Co., of Deepwater, Mo., may possibly want to buy brick machinery, etc. For information address the company at 715 Walnut street, Kansas City, Mo.

Conveying Machinery.—The Anniston Pipe & Foundry Co., Anniston, Ala., will be in the market for electric cranes. Address Louis Mueller, secretary.

Conveying Machinery.—Dietz, Schumacher & Boye, Cincinnati, O., are in the market for a 30-foot-span 10-ton traveling crane.

Corn-mill Machinery.—Ed Zarth, Gonzales, Texas, will be in need of automatic corn malting, drying and roasting machinery.

Cotton Compress.—Sam W. Smith, Albany, Ga., is in the market for a second-hand cotton compress.

Cotton Gln.—L. Love Crump, West Point, Miss., will need equipment for cotton gln of thirty bales daily capacity; also, probably boiler and engine.

Cotton-mill Machinery.—The Worth Manufacturing Co., Worthville, N. C., shall add 500 spindles; also wants to buy some Lewiston-bag looms, second-hand.

Cotton Roving.—The Horix Manufacturing Co., 1058 Hamilton street, Cleveland, O., wants 5000 pounds white cotton roving.

Electrical Machinery.—The Anniston Pipe & Foundry Co., Anniston, Ala., is in the market for a number of electric motors for driving cranes, blowers and other machinery. Address Louis Mueller, secretary.

Electrical Machinery.—The Elmwood Manufacturing Co., W. S. Monteith, 1229 Washington street, Columbia, S. C., wants proposals to supply electric motors of 400-horse-power, either all in one of several motors; must be three-phase-alternating current forty cycles.

Electrical Machinery.—The Rlyanna Gold Mining Co., of Columbia, Va., wants one dynamo 20-kilowatt, 500-volt; one motor 7½-horse-power, 500-volt; one motor 5-horse-power, 500-volt; 500 feet of wire No. 6, weather-proof; second-hand equipment will answer, if in good condition. Address T. A. Darby president.

Electric-light Plant.—The city of Jacksonville, Fla., will open bids November 11 for the erection of a \$30,000 addition to its electric-light plant, including 700-horse-power engine, arc-light dynamo, incandescent dynamo, etc. Address the mayor.

Electric-light Plant.—An electric-light plant is about to be erected at Douglasville, Ga., after plans by Frank Lederle, of Atlanta, Ga. Plans and specifications can be seen at the office of Col. J. S. James, Atlanta, Ga. For information address either one of the above or Samuel Hale, president, Douglasville, Ga.

Electric-light Plant.—The city of Greenwood, S. C., will expend \$40,000 for erection of electric-light plant and construction of water works. Address A. St. C. Lee, R. M. Hayes and Joseph F. Davis, commissioners of public works.

Engine.—See "Pulverizer."

Engine.—Atlanta Machine Works, Atlanta, Ga., wants a 100-horse-power second-hand Corliss engine in good condition; must be cheap.

Fencing.—See "Iron Fencing."

Fire Engine.—See "Boiler" above.

Flour Mill.—Blise & Martin, South Pittsburg, Tenn., want to buy machinery for custom flour mill.

Foundations.—Proposals for constructing foundation for standpipe, noted below, will be opened November 8. Contract will be let in same manner as noted for the standpipe.

Hat Factory.—M. M. Norman, Myrtle Springs, Texas, wants prices on equipment for hat factory.

Hat Machinery.—H. W. Spohn, Rutherfordton, N. C., wants particulars from makers of machinery for manufacturing soft and felt hats.

Heating Apparatus.—The Erlanger Hospital, Chattanooga, Tenn., wants equipment for steam heating and laundry. Address C. D. Mitchell, trustee.

Hoisting Engine.—Poulter & Co., 206 Bullitt Building, Philadelphia, Pa., are in the market for an upright second-hand hoisting engine and boiler on skids or wheels.

Ice Factory.—Samuel Borchardt, Room 6, Knight Building, Tampa, Fla., wants prices on equipment for small ice factory; second-hand machinery will do.

Irrigation System.—The Green & Stringle Irrigation Co., Beaumont, Texas, W. W. Green, president, will buy equipment, machinery, etc., for construction and operation of irrigation system.

Iron Fencing.—J. Alton McIver, Jonesboro, N. C., wants to buy 1100 feet of iron fencing for cemetery; second-hand will do. (Wire fence not wanted.)

Kaolin-washing Machinery.—See "Washing Plant."

Knitting Machinery.—The Georgia Mutual Colony Association, W. C. Boykin, land agent, Augusta, Ga. (office in Dyer Building), wants quotations on knitting machinery for underwear.

Laundry Equipment.—The Erlanger Hospital, Chattanooga, Tenn., wants to buy equipment for laundry. Address C. D. Mitchell, trustee.

Mining Equipment.—The Rlyanna Gold Mining Co., Columbia, Va., wants four Challenge ore feeders; second-hand, in good order, will answer. Address T. A. Darby, president.

Pulverizer for Bone.—Charles Willard & Son, Columbia, Va., are in the market for a new or second-hand bone pulverizer and a 25 to 30-horse-power engine in good order.

Railway Equipment.—The Colorado Valley Railway, A. M. Cooper, Sweetwater, Texas, wants to buy rails, cars and other equipment.

Railway Equipment.—The Anniston Pipe & Foundry Co., Anniston, Ala., is in the market for a narrow-gauge dump car for hauling sand to dump on side; gauge of track, two feet eleven inches; prices to be f. o. b. Anniston. Address Louis Mueller, secretary.

Road Machinery.—The city of Huntsville, Ala., is about to buy a road roller, stone crusher and possibly engine. Address the mayor.

Roofing.—The Anniston Pipe & Foundry Co., Anniston, Ala., will be in the market for bids on roofing material for foundry building. Address Louis Mueller, secretary.

Saw Mill.—The Kyle Lumber Co., Charles N. Frost, secretary, Franklin, La., is about to build a 30,000-foot-capacity saw mill and is ready to receive information relating to

construction, etc., in order to have a complete modern mill.

Standpipe.—Proposals will be opened November 8 for the erection of a steel standpipe, on foundations furnished by the water board, on property at West Arlington. Plans and specifications can be had by depositing check for \$25. Address Nicholas S. Hill, chief engineer water board, Baltimore, Md.

Traveling Crane.—See "Conveying Machinery."

Washing Plant.—The Mutual Mining & Manufacturing Co., Charles W. Davis, manager, Augusta, Ga., wants a washing plant for kaolin.

Water Supply.—The city of Charleston, Miss., is asking for bids on boring a well for water supply.

Water Wheels.—C. E. Scott, Cedar Bluff, Va., wants three second-hand water wheels 14-feet, 20-feet and 30-feet diameter; also, 150 feet 1 15-16 shafting and hangers for same.

Water Works.—The city of Greenwood, S. C., will expend \$40,000 on water works and electric-light plant. Address A. St. C. Lee, R. M. Hayes and Joseph F. Davis, commissioners of public works.

Water Works.—Water works are about to be erected at Douglasville, Ga., after plans by Frank Lederle, of Atlanta, Ga. Plans and specifications can be seen at office of Col. J. S. James, Atlanta, Ga. For information address either of the above or Samuel Hale, president, Douglasville, Ga.

Wire.—See "Electrical Machinery."

Wire.—Proposals for furnishing the United States Signal Office fifty miles No. 14, B. W. G., hard drawn copper telegraph wire in one-mile coils without splice; to be smooth, bright and polished, round in cross section, and without kinks of any kind. Bidders will state tensile strength, conductivity, elongation, tension (number of twists in a piece six inches long before breaking), and weight per mile; fifty miles No. 9, B. W. G., extra B. B., galvanized iron telegraph wire. Specifications for No. 9 wire furnished upon application; A. W. Greely, chief signal officer, War Department, Washington, D. C.

Woodworking Machinery.—H. B. Rice, Greenwood, Miss., wants addresses of makers of veneer machines for manufacturing crates, boxes, etc.

Woodworking Machinery.—Jarratt & Hastings, Beaufort, S. C., are in the market for rip saws, automatic lathe for handle-bars, etc.

Woodworking Machinery.—W. G. Spigle, Troutville, Va., wants prices on machinery for manufacturing slack barrels (14-horse-power engine to operate the machinery).

Woodworking Machinery.—James Bauser, Geneseo, N. Y., wants estimates on equipment for hub, spoke and wheel factory; second-hand machinery will answer.

TRADE LITERATURE.

A Novelty.—Messrs. Gara, McGinley & Co., of Philadelphia, Pa., are mailing an imitation pocketbook which contains facsimile of a check for \$100, which is payable to anyone finding flaws in their work. The firm roofs in tin, slate and tile, and works architectural sheet metal.

Saws and Blades.—In order to give a general idea of the different sizes and capacities of cold-sawing machines which it manufactures, the Q & C Co., of 700 Western Union building, Chicago, Ill., has issued a new catalogue, illustrated and described. The machines referred to are carried regularly in stock; they are sold subject to fair and impartial trial.

Generators and Motors.—An illustrated descriptive bulletin of Class "C" direct-current multipolar generators and motors, for light and power, has been issued by the Keystone Electric Co., of Erie, Pa., which manufactures the machines catalogued. Bulletins describing multipolar generators for direct connection, also generators and motors in sizes from one to five kilowatt, inclusive, and special lines of apparatus for elevators, hoists, pumps, machine tools, etc., will be furnished on application.

Machinery Catalogue.—The 1897 catalogue of the Frank-Kneeland Machine Co., of Pittsburgh, Pa., illustrates and describes a number of the most important machines which it manufactures. The company has a modern shop, with complete and thorough equipment, and by perfect methods produces a line of iron and steel-working machinery of all kinds, roll-turning lathes, lever shears, the latter either with engine

or electric motor attached; squaring shears, roll trains, sheet and tin-mill housings, etc.

For the use of the armor-plate committee the Commercial Club of Birmingham, Ala., has compiled a pamphlet showing the extent of the Birmingham district's mineral deposits, the quality of the minerals, their close proximity to each other and the furnace plants, the extent to which they have been developed and their cost delivered at the point of consumption.

The Touchstone of Life. By Ella MacMahon. Publisher, Frederick K. Stokes Co., New York.

The touchstone of life as revealed in the last pages of this novel is love. What standing has a novel, anyhow, without love? But this particular love is evolved in the course of a plot based upon the crossing of the lives of two half-brothers, one of them of the bar sinister, who happens to possess all the heroics of the occasion. The political contentions of an English dependency furnish the framework.

Machines for Every Stitching Process.

One of the most notable exhibits at the Cotton States Exposition comprised some of the numerous kinds of sewing machines for manufacturing purposes made by The Singer Manufacturing Co.

No product of American ingenuity has been of greater benefit to mankind or become more widely distributed all over the world. It is unquestionably the most important agent in promoting the consumption of all kinds of textile fabrics, and its benefit to the cotton industry, although apparently indirect, deserves to rank with the Cotton Gin and the Compress. The Singer Manufacturing Co. evidently realizes the close relation between its products and those of the Cotton States, and its exhibit at Atlanta was peculiarly appropriate and creditable.

The Commissioners of Awards, in giving this exhibit the highest recognition possible, the special gold medal, have adhered closely and consistently to their announcement that this award should only be granted to inventions of far-reaching significance, having "pre-eminent worth and widespread importance." The Singer Manufacturing Co. make more than half the sewing machines produced in the world; their devices perform every stitching process required in manufactures and in any kind of fabric capable of needle puncture.

They make more than fifty distinct classes of sewing machines, these classes comprising several hundred varieties. This Company's machines are not confined to any particular mechanism, patented and peculiar to itself, but its aim seems to be to make its name on a sewing machine a sufficient guarantee for the highest grade of material and workmanship, applied in the most effective mechanical designs for their special purpose. With this end in view, novel and ingenious devices are constantly being contrived at its various factories to meet new requirements as they arise at its numerous agencies all over the world. Its products comprise lock-stitch sewing machines, carrying from one to twelve needles, using either the oscillating or the vibratory shuttle; also chain-stitch sewing machines having a rotating hook, and others having the looper mechanism.

Thus, the Singer exhibit at Atlanta appears in eleven distinct classes of industry and comprises twenty-six different types of sewing machines used for an infinite variety of purposes. As an indication of the range of this variety it may be mentioned that there are machines especially for making button-holes and eyelet-holes, others for sewing on buttons and buckles, machines for making bags, for overseaming the raw edges of carpets and for sewing them together, for hemstitching, for fancy stitching and embroidery, stitching leather and paper up to one and one-half inches in thickness, quilting padded goods, etc.

Viewed simply as an exposition of the highest inventive and mechanical skill, these wonderful labor-saving devices are instructive to all—they are especially interesting to the textile manufacturer. He will get ideas from or be able to suggest modifications of the many forms presented, which may be of decided advantage in utilizing his product.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for this page.

New Corporations.

The Savings Society of Atlanta has been formed by Thomas Elliott, J. S. B. Thompson and others, of that city.

The Kansas City Loan & Guaranty Co. of Kansas City, Mo., has been organized, with \$5000 capital, by W. E. Sullivan, H. L. Patterson and others.

The Florence Investment Co., of St. Joseph, Mo., has been incorporated with \$48,000 capital by W. A. P. MacDonald, Milton Tootle and others.

The Baltimore Security & Trading Co. has been organized at Baltimore by Nicholas P. Bond, Francis K. Carey and others, with \$10,000 capital.

The State Bank & Trust Co. of Richmond, Ky., has been organized, with \$150,000, by J. Stone Walker, R. E. Turley, W. T. Tevis and others.

The New Cole Company Building and Loan Association has been organized at Jefferson City, Mo., with \$200,000 capital, by L. D. Gordon and others.

The Mutual Loan & Investment Co. of Fairfield County, South Carolina, has been formed by Joseph C. Jackson, John M. Russell and others, with \$9000 capital.

It is reported that arrangements are being made to organize another national bank at Asheville, N. C., which will probably take charge of the business of the Asheville National Bank, which recently closed its doors.

New Securities.

The question of issuing water-works bonds will be decided upon by the people of Hazelhurst, Miss., at an election to be held November 9.

Wm. McClanahan, mayor, will receive bids until November 2 for the issue of \$18,000 worth of bonds to be sold by the town of Milan, Mo.

J. W. Dickey, of Augusta, Ga., has purchased the issue of \$50,000 of 5 per cent. bonds of Summerville, Ga. The price paid was 102.777.

The issue of \$10,000 worth of 5 per cent. bonds made by Grafton, W. Va., has been taken by the First National Bank of that city at 102.

P. R. Heisig, secretary, will give information relative to the issue of \$80,000 in 6 per cent. bonds which may be sold by the city of Beaumont, Texas.

The town of West Union, W. Va., will receive bids until November 12 for \$6000 worth of 6 per cent. water bonds. The cashier of the West Union Bank will give further information.

The commissioners of Currituck county, North Carolina, will receive bids for the sale of \$8000 in bonds until November 8. The bonds will bear interest at the rate of 6 per cent. J. A. Griggs, chairman of the board, may be addressed at Currituck, N. C.

A dispatch from Americus, Ga., announces that already a large number of inquiries have been received for the proposed issue of \$35,000 of 4½ per cent. bonds to be issued by that city. Chairman Miller, of the finance committee, may be addressed for particulars.

The town of Abbeville, S. C., has determined to issue \$40,000 in bonds for water-works purposes. Mayor D. C. DuPre informs the Manufacturers' Record that a bond commission has been appointed consisting of A. C. Lee, R. M.

TABLE OF CONTENTS.

EDITORIAL:	Page.
Utilizing Water-Power.....	207
For a Textile School.....	207
Tennessee in Honor.....	207
A Fair Balance.....	207
Defining a Curse.....	207
Southern States Farm Magazine.....	208
Industrial News from Birmingham.....	208
In Western Tennessee.....	208
Southern Coal for Mexico.....	208
Display of Machinery.....	208
RAILROAD NEWS:	
Southern Railway Commended.....	209
Electric Motors on a Steam Railway.....	209
Springfield, Little Rock & Gulf.....	209
Steamships to Southern Ports.....	209
A Traffic Agreement.....	209
Mr. Turk Elected President.....	209
A Profitable Branch.....	209
Railroad Notes.....	209
TEXTILES:	
Round Bale Abroad.....	210
Textile Notes.....	210
COTTONSEED OIL:	
The Market for Cottonseed Products.....	210
Cottonseed-Oil Notes.....	210
New Steamship Launched.....	210
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	211
Savannah.....	211
Charleston.....	211
Mobile.....	211
Beaumont.....	211
Lumber Notes.....	211
Plea for Roanoke.....	211
MECHANICAL:	
A Modern Plant (Illus.).....	212
Ball Engines (Illus.).....	213
Hydraulic Ram (Illus.).....	213
Nine-Inch Four-Sided Moulder (Illus.).....	214
Hubs and Hangers (Illus.).....	214
PHOSPHATES:	
Phosphate Markets.....	215
Phosphate and Fertilizer Notes.....	215
Iron Markets.....	215
Trade Notes.....	215
Trade Literature.....	215, 218
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	216
Building Notes.....	217
Railroad Construction.....	217
Machinery Wanted.....	218
FINANCIAL NEWS:	
New Corporations.....	219
New Securities.....	219

Hays and Thomas F. Davis, Contractors and others may address the committee.

The Chattanooga, Rome & Southern Railroad Co. has given a mortgage to the Union Trust Co. of New York to secure an issue of \$500,000 in 5 per cent. gold bonds. This issue consists of a lien upon the entire line, and it is believed is intended to finance the extension of the road; also to complete repairs to the shops of the company at Chattanooga. Charles B. Wilburn is president of the company.

The Southport (N. C.) Leader has been succeeded by the Southport Standard.

The real-estate agents of Dallas, Texas, have organized for the purpose of mutual benefit, and have elected Thomas C. McEnnis, president.

The Columbian Iron Works, of Baltimore, was the lowest bidder for the construction of the proposed revenue steamer which the government has decided to have built for use on the Atlantic coast. The bid of this company was \$141,000, \$34,000 less than the appropriation made by Congress.

At the recent meeting of the road congress, held at Raleigh, N. C., the question of good roads in the city was discussed, and references made to the work in Mecklenburg county, where it is stated that thirteen new roads are under construction, which aggregate about seventy miles. Resolutions were adopted by the convention asking the people of the State to use wide tires as much as possible on

J. WM. MIDDENDORF.

Members Baltimore Stock Exchange.

WM. B. OLIVER.

MIDDENDORF, OLIVER & CO.
BANKERS AND BROKERS.

No. 213 E. German Street, [KEYER BUILDING.] Baltimore, Md.
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

SPERRY, JONES & CO.

DEALERS IN Southern Investment Securities,

239 East German Street, Baltimore, Md.

OUR FACILITIES ARE UNEQUALLED.

IF YOU WANT MONEY

Remember that I purchase all kinds of Endowment, Tontine and Distribution Insurance Policies at most liberal prices. No risk. Business done through banks. Communications confidential. Give full particulars when writing.

E. A. COWLEY, No. 712 MERCHANTS NATIONAL BANK, BALTIMORE, MD.

the wagons, and appointing a committee to act in connection with the North Carolina Good Roads League.

FOR THE
Renting and Purchasing

OF
Warehouses,
Manufacturing Sites,
Wharf,
and other Business Property,
Apply to
SAFE DEPOSIT & TRUST CO.
OF BALTIMORE.

13 SOUTH STREET.

Important Notice.

ABSOLUTE SALE, by Trustee, under decree of foreclosure, at Public Auction, of the very extensive and thoroughly equipped

Steel Rolling Mill Plant of the
Sweet's Manufacturing Co.
at Syracuse, N. Y.

including valuable REAL ESTATE, MACHINERY, TOOLS, IMPLEMENTS, PATENTS, &c., in running order. Every facility given to thoroughly examine the property.

Sale will take place at 10 o'clock A. M.,
NOVEMBER 17th, 1897,
at the premises.

For further particulars apply to
STERN & RUSHMORE,
Attorneys for Trustee,
40 WALL STREET, NEW YORK CITY.

MARYLAND TRUST CO.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

A LEGAL DEPOSITORY FOR COURT AND TRUST FUNDS.

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

J. WILLCOX BROWN, PRESIDENT.

LLOYD L. JACKSON, FIRST VICE-PRES.

HENRY J. BOWDOIN, SECOND VICE-PRES.

J. BERNARD SCOTT, Secretary and Treasurer

DIRECTORS:

J. Willcox Brown, Leopold Strouse.
Wm. A. Marburg, Henry Walters.
Basil B. Gordon, H. A. Parr.
Lloyd L. Jackson, B. N. Baker.
Fred. M. Colston, Andrew D. Jones.
H. J. Bowdoin, James Bond.
Joshua Levering, Alexander Brown.
Frank Brown, Douglas H. Gordon.
W. B. Brooks, Jr., Clayton C. Hall.
W. H. Baldwin, J. D. Baker.
Fredk. W. Wood, F. S. Bangs.
F. M. Thieriet, John B. Garrett.

JOHN L. WILLIAMS & SONS,
BANKERS,

Dealers in RICHMOND, VA.

Southern Investment Securities,

MUNICIPAL BONDS A SPECIALTY.

Correspondence Invited.

TO CONTRACTORS.

If you have any municipal bonds or warrants, taken in payment for building waterworks, court or school houses, jails, etc., write us. Conditions being favorable, we can use them.

F. M. STAFFORD & CO.

Dealers in Southern Municipal Securities, Chattanooga, Tenn.

Mercantile Trust & Deposit Co.

OF BALTIMORE.

Paid-up Capital, \$1,000,000.
Surplus, \$1,000,000.

DEPOSITS RECEIVED
On which interest is allowed, governed by current rates obtainable.

TRUSTEES AND ADMINISTRATORS.

This company is a Legal Depository for funds in the hands of Trustees or Administrators, and allows interest on same pending distribution.

Authorized to act as Executor, Administrator, Guardian, Receiver or Trustee.

ACTS as Trustee of Mortgages of Corporations and accepts Transfer Agency and Registry of Stocks.

Safe Deposit Boxes for Rent.
Vaults supplied for Storage of Silver Chests, etc.

JOHN GILL, of R., President.

The
BIG UNION
Mining Co.

Owens and is now opening up rich gold mines in the famous Leadville Gold Belt of Colorado. Its mines lie on the same contact vein with the most noted of the great Leadville mines. One of these, the "Little Johnny," is the greatest gold mine in Colorado and perhaps in the world. Its present output is about \$300,000 per month, and it is now paying monthly dividends of \$100,000 to \$200,000. The officers and stockholders of the company are not speculators but are well-known conservative business men. Here are some of them:

OFFICERS:
R. E. LYON, President.
STEPHEN H. EMMENS, Vice-President.
H. B. TILDEN, Treasurer.

DIRECTORS:

B. L. Duke, the great tobacco manufacturer of Durham, N. C.

W. T. O'Brien, of the American Tobacco Co., Durham, N. C.

Stephen H. Emmens, Pres. of the Mining and Industrial Exchange, New York City.

R. E. Lyon, of Baltimore, Md.

L. D. Hearitt, Cashier First National Bank, Durham, N. C.

H. B. Tilden, of Baltimore, Md.

The stock of this company has been listed on the New York Mining and Industrial Exchange.

The office of the company is at 849 Equitable Building, Baltimore, Md.

The treasury stock now being offered affords an investment opportunity that is well worth looking into.

The company does not care to sell in small lots, but will be glad to confer with investors with reference to the purchase of large blocks. The officers feel confident that the facts to be presented concerning the company's property will appeal to the best informed and most conservative and cautious investor.

Alphabetical Index of Advertisers.

For "Classified Index" see pages 3, 5 and 7.

<div>Abbe, M. F. 35</div> <div>Acme Malleable Iron Works. 24</div> <div>Adams, George S. 25</div> <div>Adams, William H. 6</div> <div>Aetna Standard Iron & Steel Co. 19</div> <div>Ahrens & Ott Mfg. Co. 16</div> <div>Alton & Wood. 38</div> <div>Alabama Bridge & Boiler Co. 9</div> <div>Alabama Foundry & Machine Wks. 20</div> <div>Albany Steam Trap Co. 9</div> <div>Alber & Byrne. 6</div> <div>Albro, E. D., Co. 22</div> <div>Alexander Bros. 11</div> <div>Alexander & McLaughlin. 2</div> <div>Allen Anti-Rust Mfg. Co. 25</div> <div>Alpha Paint & Mineral Co. 20</div> <div>Alsing, J. R., Co. 34</div> <div>American Cotton Oil Co. 29</div> <div>American Diamond Rock Drill Co. 35</div> <div>American Engine Co. 21</div> <div>American Impulse Wheel Co. 33</div> <div>American Ship Windlass Co. 27</div> <div>American Supply Co. *</div> <div>Anderson, J., Jun. & Co. 20</div> <div>Anderson, Water, Light & Power Co. 21</div> <div>Andrews, A. H., Co. 1</div> <div>Andrews, Perry. 6</div> <div>Angle Lamp Co. 38</div> <div>Apollo Iron & Steel Co. 18</div> <div>Armitage Mfg. Co. 25</div> <div>Asheville Woodworking Co. 20</div> <div>Atkins, E. C., & Co. 26</div> <div>Atlanta Terra Cotta Co. 32</div> <div>Austin Separator Co. 17</div> <div>Austin White Lime Co. 6</div>	<div>Carlin's, Thomas, Sons 21</div> <div>Carnell, George 30</div> <div>Caroline Iron Works 34</div> <div>Carver Cotton Gin Co. 8</div> <div>Case, J. I., T. M. Co. 15</div> <div>Case Mfg. Co. 9</div> <div>Caster & Curran. 8</div> <div>Central Expanded Metal Co. 25</div> <div>C. G. 31</div> <div>Channon, H., Co. 10</div> <div>Chapman, Wm. A., & Co. 6</div> <div>Chapman Valve Mfg. Co. 8</div> <div>Charlotte Machine Co. 29</div> <div>Chattanooga Fdy. & Pipe Works. 32</div> <div>Chattanooga Machinery Co. 27</div> <div>Chattanooga Steel Roofing Co. 24</div> <div>Chesapeake Belting Co. 11</div> <div>Chester Steel Castings Co. 13</div> <div>Chicago Belting Co. 11</div> <div>Chrome Steel Works 12</div> <div>Cincinnati Corrugating Co. 25</div> <div>Cincinnati Elevator Works. 8</div> <div>Cin., Hamilton & Dayton R. R. 31</div> <div>Cincinnati Screw & Tap Co. 19</div> <div>Clark, W. J., Co. 35</div> <div>Clendenin Bros. 24</div> <div>Climax Mfg. Co. 13</div> <div>Clonbrock Steam Boiler Co. 16</div> <div>Coburn Trolley Track Mfg. Co. 9</div> <div>Cohoes Iron Fdy. & Mch. Co. 29</div> <div>Commercial Electric Co. 36</div> <div>Commercial Wood & Cement Co. 6</div> <div>Committee on Drainage. 19</div> <div>Contractors' Plant Mfg. Co., Ltd. 9</div> <div>Cordesman Machine Co. 26</div> <div>Cordesman, Meyer & Co. 27</div> <div>Cornman Co. 21</div> <div>Cortright Metal Roofing Co. 24</div> <div>Cotton States Belting & Supply Co. 18</div> <div>Covert Mfg. Co. 38</div> <div>Cowley, E. A. 219</div> <div>Cox & Sons Co. 12</div> <div>Cox, Justice, Jr. 20</div> <div>Crompton & Knowles Loom Wrks. *</div> <div>Cronk Hanger Co. 1</div> <div>Crosby Steam Gage & Valve Co. 14</div> <div>Cruickshank, D. B. 21</div> <div>Curtis & Marble Machine Co. 29</div> <div>Cutler Mfg. Co. 25</div> <div>Cypress Lumber Co. *</div>	<div>Gallert, S. 20</div> <div>Gandy Belting Co. 11</div> <div>Garrett, C. S., & Son. 24</div> <div>Gas Engine & Power Co. 9</div> <div>General Electric Co. 29, 37</div> <div>General Fire Extinguisher Co. 8</div> <div>General Manager 20</div> <div>Gilbert, C. M., & Co. 6</div> <div>Glaskin, George F., & Co. 6</div> <div>Glen Cove Machine Co., Ltd. 26</div> <div>Globe Machine Works 24</div> <div>Golden's Foundry & Machine Co. 23</div> <div>Gowdey, J. A., & Son. 29</div> <div>Graphite Lubricating Co. 13</div> <div>Grasty, Robt. Ware. 21</div> <div>Gregory Co., C. E. 21</div> <div>Grosse, L., Art Glass Works. 24</div>	<div>McClave, Brooks & Co. 9</div> <div>McCully, R. 34</div> <div>McDonald, John, & Sons. 6</div> <div>McDowell, Hamilton. 36</div> <div>McFadden, Charles, Jr. 6</div> <div>McGowan, John H., Co. 33</div> <div>McKenna, David. 1</div> <div>McLanahan & Stone. 35</div> <div>Mead, Y. A., Cycle Co. 36</div> <div>Mecklenburg Iron Works. 18</div> <div>Mercantile Trust & Deposit Co. 219</div> <div>Merchants & Miners' Transp. Co. 31</div> <div>Meres, C. R., Heater Mfg. Co. 9</div> <div>Meridian Machine Shops 28</div> <div>Meyer, Dr. Otto. 6</div> <div>Michle Tobacco Co. 21</div> <div>Middendorf, Oliver & Co. 219</div> <div>Milburn, Frank P. 6</div> <div>Miller Bros. & Co. 6</div> <div>Mitchell Tempered Copper Co. 37</div> <div>Mitskhun, M., & Co. 22</div> <div>Moore & McCrary. 6</div> <div>More, Jones & Co. 13</div> <div>Morse Twist Drill Mch. Co. 2</div> <div>Morse, Williams & Co. 37</div> <div>Mueller, H., Mfg. Co. 33</div> <div>Mundt & Sons. 34</div> <div>Munson Bros. 35</div> <div>Murray, Dougal & Co. 29</div> <div>Murray, James & Son. 34</div>	<div>Robinson & Orr. 22</div> <div>Rossendale-Reddaway Belting & Hose Co. *</div> <div>Rowley & Hermance Co. 27</div> <div>Ruger, J. W., & Co. 15</div> <div>Russell & Co. 35</div>												
<div>Babcock & Wilcox Co. *</div> <div>Baeder, Adamson & Co. 8</div> <div>Bailey-Lebby Co. 35</div> <div>Bailey, John T., & Co. 18</div> <div>Bally Mfg. Co. 37</div> <div>Baird, U., Machinery Co. 12</div> <div>Baldwin Locomotive Works. 13</div> <div>Ball Engine Co. 14</div> <div>Baltimore, Chesapeake & Richmond Steamboat Co. 31</div> <div>Baltimore Engraving Co. 22</div> <div>Baltimore & Ohio R. R. 31</div> <div>Baltimore Storage & Light. Co. 31</div> <div>Barber Asphalt Paving Co. 19</div> <div>Barnes Mfg. Co. 32</div> <div>Barnes, W. F. & John, Co. 8</div> <div>Barnett, G. & H., Co. 38</div> <div>Bates's, James, Sons. 8</div> <div>Bay Line. 31</div> <div>Beach, H. L. *</div> <div>Beckley, A. J., & Co. 35</div> <div>Benjamin, O. P., Mfg. Co. 33</div> <div>Berryman, James. 16</div> <div>Bertsch & Co. *</div> <div>Besly, Chas. H., & Co. 38</div> <div>Bethlehem Iron Co. *</div> <div>Big Four Route. 31</div> <div>Big Union Mining Co. 219</div> <div>Biltmore Estate. 22</div> <div>Bird, Wm. M., & Co. 6</div> <div>Birmingham Boiler Works. 9</div> <div>Birmingham Mach. & Fdry. Co. 21</div> <div>Black Mfg. Co. 37</div> <div>Bliss Co., E. W. 24</div> <div>Block-Pollak Iron Co. 22</div> <div>Boomer & Boschert Press Co. 19</div> <div>Boston Belting Co. 11</div> <div>Boswell, W. C. 21</div> <div>Bowdon, R. E. 6</div> <div>Bowers, A. L. 20</div> <div>Bowes, F. K. 31</div> <div>Boyd, Jones & Co. 10</div> <div>Bradford Detective Agency. 6</div> <div>Bradford Mill Co. 12</div> <div>Bradley Pulverizer Co. 35</div> <div>Bradstreet Company. 8</div> <div>Branson Machine Co. 28</div> <div>Brooks, T. H., & Co. 24</div> <div>Broomell, Schmidt & Co. 10</div> <div>Brotherhood, F. 21</div> <div>Brown, A. & F. 23</div> <div>Brown Cotton Gin Co. 28</div> <div>Brown Hoisting & Con. Mch. Co. 9</div> <div>Brown, Lucius P. 6</div> <div>Buckeye Engine Co. 15</div> <div>Buckeye Iron and Brass Works. 29</div> <div>Buffalo Forge Co. 38</div> <div>Bureau of Freight and Transportation, Charleston, S. C. 18</div> <div>Burgess, Chas. S. 20</div> <div>Burt Labelling Machine Co. 23</div> <div>Bushnell, G. H., Press Co. 28</div> <div>Byers, Jao. F., Machine Co. 9</div>	<div>Dallett & Co. 22</div> <div>Davis-Farrar Co. 32</div> <div>Davis Foundry and Mch. Works. 1</div> <div>Davis, G. M., & Son. *</div> <div>Davis, Kelly & Co. 22</div> <div>Dean Bros. Steam Pump Works. 32</div> <div>De Kalb, Courtenay. 6</div> <div>De Loach Mill Mfg. Co. 26</div> <div>Dempwolf, C. H., & Co. 34</div> <div>Detroit & Cleveland Stm. Nav. Co. 31</div> <div>Dietz, Schumacher & Boye. 12</div> <div>Dixton, Henry, & Sons. 1</div> <div>Dixon, Jos., Crucible Co. 38</div> <div>Dopp, H. Wm., & Son. 29</div> <div>Dow Wire Works Co. 24</div> <div>Draper Co. 18</div> <div>Draper Machine Tool Co. 12</div> <div>Dudley, T. J., & Son. 22</div> <div>Dufur & Co. 24</div> <div>Dunbar, R., & Son. 35</div> <div>Dunning, W. D. 19</div>	<div>Illinois Central Railroad. 31</div> <div>India Alkali Works. 28</div> <div>Ingersoll-Sergeant Drill Co. 18</div> <div>International Corres. Schools. 6</div>	<div>Jackson Mfg. Co. 23</div> <div>Jeffrey Mfg. Co. 27</div> <div>Jenkins Bros. 38</div> <div>Jewell Belting Co. 11</div>	<div>Kansas City, Pittsburg & Gulf R. R. 31</div> <div>Keeler, E., Co. 9</div> <div>Kelly, O. S., Co., The. 35</div> <div>Kelly & Jones Co. 17</div> <div>Kemper, C. E. 19</div> <div>Kendrick Valve & Washer Co. 32</div> <div>Keystone Crusher & Roller Co. 35</div> <div>Keystone Drop Forge Co. 8</div> <div>Kilbourne & Jacobs Mfg. Co. 2</div> <div>Kilburn, Lincoln & Co. 28</div> <div>Knowles Loom Works. 29</div> <div>Knox, Henry E., Jr. 6</div> <div>Kokomo Teleph'ne & Elec. Mfg. Co. 37</div>	<div>Ober Lathe Co. 27</div> <div>Otto Gas Engine Works. *</div>	<div>Pancoast, Henry B., & Co. 23</div> <div>Pancoast Ventilator Co. 24</div> <div>Patitz, A. M. 6</div> <div>Paxson, J. W., & Co. 8</div> <div>Peacock, George. 37</div> <div>Pechin, T. E. 10</div> <div>Peck-Hammond Co. 24</div> <div>Penberthy Injector Co. 38</div> <div>Perkins Mfg. Co. 22</div> <div>Pettee Machine Works. 29</div> <div>Philadelphia Bourse. 9</div> <div>Philadelphia Eng. Works, Ltd. *</div> <div>Phila. Machine Screw Works. 38</div> <div>Philadelphia Steel Roofing Co. 25</div> <div>Philadelphia Textile School. 19</div> <div>Pierce-Crouch Engine Co. 15</div> <div>Piqua Copying Machine Co. 10</div> <div>Pittsburg Locomotive Works. *</div> <div>Pittsburgh Plate Glass Co. 25</div> <div>Pittsburg Tool Steel Co. 18</div> <div>Playford Stoker Co. 16</div> <div>P. O. Box L. 20</div> <div>Pomona Terra Cotta Co. 32</div> <div>Pope Mfg. Co. 36</div> <div>Porter, H. K., & Co. 13</div> <div>Poulterer & Co. 20, 22</div> <div>Powhatan Clay Mfg. Co. 24</div> <div>Pratt, N. P., Laboratory. 6</div> <div>Pratt & Whitney Co. 12</div> <div>Pratt & Weir Chuck Co. 12</div> <div>Price & Co. 22</div> <div>Price & Heald. 22</div> <div>Priestman & Co. 17</div> <div>Providence Machine Co. 29</div> <div>Pulsometer Steam Pump Co. 32</div>	<div>Queen City Printing Ink Co. 36</div> <div>Queen City Supply Co. 29</div>	<div>Rand Drill Co. 23</div> <div>Rankin, J. E. 19</div> <div>Rawson Electric Co. 37</div> <div>Raymond & Gray. *</div> <div>Record Printing House. 1</div> <div>Reed, F. E., Co. 12</div> <div>Reliance Gauge Co. 16</div> <div>Remington Machine Co. *</div> <div>Repauno Chemical Co. 10</div> <div>Rhoads, J. E., & Sons. 11</div> <div>Richmond Loco. & Mch. Wks. 13</div> <div>Riter & Conley. 6</div> <div>Rivanna Gold Mining Co. 20</div> <div>Robbins & Myers Co. 21</div> <div>Roberts Mfg. Co. 27</div> <div>Robertson, Jas., Mfg. Co. 34</div> <div>Roberson, F. M., & Co. 24</div> <div>Robinson, Wm. C., & Son. 34</div>	<div>Sabel Bros. 22</div> <div>Safe Deposit & Trust Co. 219</div> <div>Samson Steel Belt Hook Co. 18</div> <div>Sanderson, John. 6</div> <div>Saunders, D., Sons. 12</div> <div>Schieren Chas. A., & Co. 11</div> <div>Scott & Williams. 28</div> <div>Seabury, Charles L., & Co. 9</div> <div>Seidel, R. B. 4</div> <div>Shaw, Willis. 21</div> <div>Shawhan-Thresher Electric Co. 37</div> <div>Sherwood, H. M. 20</div> <div>Shultz Belting Co. 10</div> <div>Simpson, H. P. 38</div> <div>Simpson, J. S. & G. F. 12</div> <div>Sinclair-Scott Co. 12</div> <div>Sinclair, S. H., Co. 12</div> <div>Situations Wanted. *</div> <div>Skinner Chuck Co. *</div> <div>Smethurst & Allen. 2</div> <div>Smith-Courtney Co. 9</div> <div>Smith, S. Morgan, Co. 33</div> <div>Smith & Kilby Co. 22</div> <div>Snow Steam Pump Works. 32</div> <div>Southeastern Lime & Cement Co. 6</div> <div>Southern Fdry. & Mch. Works. 21</div> <div>Southern Iron & Equipment Co. 22</div> <div>Southern Iron Works. 13</div> <div>Southern Log Cart & Supply Co. 13</div> <div>Southern Railway Co. 31</div> <div>Southern Real Estate Exchange. 21</div> <div>Spear's, Alden, Sons & Co. 25</div> <div>Sperry, Jones & Co. 219</div> <div>Springfield Gas Engine Co. 15</div> <div>Sprout, Waldron & Co. 15</div> <div>Stafford, F. M., & Co. 219</div> <div>Standard Coal Co. 6</div> <div>Standard Mill Supply Co. 28</div> <div>Standard Oil Co. 25</div> <div>Standard Paint Co. 25</div> <div>Standard Tool Co. 38</div> <div>Stanley Electric Mfg. Co. 37</div> <div>Starr, B. F., & Co. 35</div> <div>Steel Rail Supply Co. 22</div> <div>Sterling Emery Wheel Mfg. Co. 4</div> <div>Stern & Rushmore. 219</div> <div>Stevens, H., Sons Co. 38</div> <div>Stewart, Jas., & Co. 6</div> <div>Stiles & Fladd Press Co. 8</div> <div>Stillwell-Bierce & Smith-Valle Co. 32</div> <div>Stow Flexible Shaft Co. Ltd. 33</div> <div>Struthers, Wells & Co. 16</div> <div>Stuebner, G. L., Iron Works. 19</div> <div>Sturtevant, B. F., Co. 29</div> <div>Sturtevant Mill Co. *</div> <div>Sullivan Machinery Co. 34</div> <div>Sydnor Pump & Well Co. 20</div>	<div>Taylor, A. W., Land & Lumber Co. 21</div> <div>Taylor, J. H. 22</div> <div>Thomas Publishing Co. 22</div> <div>Toledo Machine & Tool Co. 22</div> <div>Toomey, Frank. 21</div> <div>Tower & Wallace. 21</div> <div>Trenton Iron Co. 18</div> <div>Trevor Mfg. Co. 26</div> <div>Tudor Boiler Mfg. Co. 17</div> <div>Tyler, Charles. 20</div>	<div>Union Drawn Steel Co. 23</div> <div>Union Electric Co. 37</div> <div>Union Iron Works Co. 37</div> <div>United Electric Improvement Co. 37</div> <div>U. S. Sanitary Co. 1</div>	<div>Valdosta Foundry & Machine Co. 8</div> <div>Vaile & Murdoch Iron Works. 16</div> <div>Valley Iron Works. 9</div> <div>Vanduzen Co., The E. W. 33</div> <div>Van Noorden, E., & Co. 6</div> <div>Van Wie, Irwin. 33</div> <div>Vitrified Wheel Co. 27</div>	<div>Wais & Roos Punch & Shear Co. 21</div> <div>Walker & Elliott. 20</div> <div>Warren Chemical & Mfg. Co. 25</div> <div>Washington Slate Co. 25</div> <div>Watkins & Hardaway. 6</div> <div>Watson, Benjamin. 22</div> <div>Webster, Warren, & Co. 8</div> <div>Weir Frog Co. 37</div> <div>West Mfg. Co. 8</div> <div>Western Electrical Supply Co. 27</div> <div>Western Maryland Railroad. 31</div> <div>Westinghouse Air Brake Co., The. 36</div> <div>Westinghouse Elec. & Mfg. Co. 36</div> <div>Westinghouse Machine Co. 14, 21</div> <div>Wetherill, Robt., & Co. 16</div> <div>Whaley, W. B. Smith, & Co. 6</div> <div>Wheeling & Lake Erie Railway. 31</div> <div>White, L. & I. J., Co. *</div> <div>Whitinsville Spinning Ring Co. 28</div> <div>Whitney, Baxter D. 16</div> <div>Wilkinson Mfg. Co. 16</div> <div>Williams Bros. 13</div> <div>Williams, Haskins, & Co. 23</div> <div>Williams, I. B., & Sons. 11</div> <div>Williams, J. H., & Co. 38</div> <div>Williams, John L., & Son. 219</div> <div>Williams & Schmid. 1</div> <div>Williamsport Machine Co. 28</div> <div>Willis, E. 21</div> <div>Wilson Laundry Machinery Co. 6</div> <div>Wingfield, Nisbet. 6</div> <div>Wolf Co., The. 18</div> <div>Wolf Co., Fred. W. 19</div> <div>Wood, R. D., & Co. 2</div> <div>Woodward & Stillman. 2</div> <div>Worthington, Henry R. 18</div> <div>Wright Co., The. 12</div> <div>Wrightsville Hardware Co. 24</div>	<div>York Mfg. Co. 14</div> <div>Young, W. B. 19</div>	<div>Zier & Co., M. 9</div>	<div>Ads. marked thus * appear every other week.</div> <div>Ads. marked thus † appear in first issue of each month.</div> <div>Ads. marked thus ‡ not in this issue.</div>

Ads. marked thus * appear every other week.
 Ads. marked thus † appear in first issue of each month.
 Ads. marked thus ‡ not in this issue.